

New York State Education Department

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# New York State Museum

JOHN M. CLARKE, Director

Bulletin 117

ARCHEOLOGY 14

EXCAVATIONS IN

## AN ERIE INDIAN VILLAGE AND BURIAL SITE AT RIPLEY, CHAUTAUQUA CO., N. Y.

BEING THE RECORD OF THE STATE MUSEUM ARCHEOLOGICAL  
EXPEDITION OF 1906

BY

ARTHUR C. PARKER

*Part I*

ARCHEOLOGY IN NEW YORK

### INTRODUCTION

#### Beginnings of Archeology and Ethnology in the State Museum

In the second annual report of the State Cabinet of Natural History [1849], Peter Wendell, Chancellor of the Board of Regents, said, "In 1847, at the suggestion of the Governor [Young] who had visited the interesting Historical and Antiquarian Museum at Hartford, Ct., it was resolved that an attempt should be made to establish a similar one in connection with the State Cabinet. A circular was addressed to our fellow citizens asking for their aid in furnishing relics of the ancient masters of the soil. The appeal has not been unnoticed. . ."

Thus the State Cabinet almost at its inception became the depository of "an historical and antiquarian collection." At first this collection was a miscellany of historical and Indian relics, the latter

exhibited merely as curios of the fast disappearing aborigines. To increase this collection and give it a definite value, Lewis H. Morgan was employed to collect such material from the Indians as would be of interest, and the accounts of the Morgan collection contained in the second, third and fifth annual reports of the State Cabinet are without doubt the best descriptions of confederated Iroquois ethnological material of the period 1790-1850 extant.

How little at first Morgan realized the scientific value of his work may be known from his letter to the Regents under date of October 31, 1848, in which he discussed the necessity of the cabinet.

Such a cabinet would, it is true, contain but little to instruct, would seem but slightly to enlarge the bounds of human knowledge, yet it would be all it pretended,—a memento to the red race who preceded us. . .

Opinion must have suddenly changed, for Mr Morgan three years later, deeply impressed by his contact with the Iroquois, wrote the profoundest ethnographic study of the American Indians ever produced up to his time, and *The League of the Iroquois* yet remains a classic. The scientific world had awakened, ethnology as a distinct science was recognized, and the great work of Squier and Davis, *Ancient Monuments in the Mississippi Valley*, demonstrated that perhaps there was some real scientific value in the "mementos of the red race" and that in the category of natural sciences American archeology was preeminently worthy of a place. Early in the 19th century, however, there was no American archeology or ethnology as we know these subjects now, and therefore there were no *specimens*. Objects were termed *relics* and people interested in relics were called antiquarians. The curiosities which they found in the cornfield when it was plowed were puzzling wonders which caused the finders to invent all sorts of wild theories as far from truth as human imagination could lead. Strange ideas were formed and every new discovery warped to support them. Anthropology at this period took no notice of a flint chip, of a wampum belt, or of a snatch of Indian folk song—it related rather to phrenology and the doctrine of temperaments.<sup>1</sup> Then the works of Morgan, of Squier and Davis and of Prof. (afterward Sir) Daniel Wilson, came before the world, and with those works a new epoch dawned.

When Morgan began his third year's work for the State he seems to have entered it with a new spirit, for at this time, feeling the real

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<sup>1</sup> The term "anthropology" was first employed in 1501 by Magnus Hundt, of Marburg, and referred to human anatomy.



needs of the cabinet, he secured a magnificent collection and described it at length in the fifth cabinet report, published in 1852. Although Morgan was the one most actively interested in building up the museum Indian collection, others also made valuable contributions in the way of records as well as relics. Notable among these may be mentioned E. G. Squier whose "Ground Plans and Dimensions of Several Trench Enclosures in Western New York," published in the second State Cabinet report [1849], has preserved for posterity a record of a large number of Indian earthworks now obliterated; Franklin B. Hough, who contributed a paper to the third State Cabinet report [1850] with the title, "Notice of Several Ancient Remains of Art in Jefferson and St Lawrence Counties"; T. Apoleon Cheney, who contributed a report on "Ancient Monuments in Western New York," 13th museum report [1860]; Rev. Jacques Bruyas who contributed "Radical Words of the Mohawk Language," published in the 16th report of the museum [1863]. "The Stone and Bone Implements of the Arickarees," by Lewis H. Morgan, published in the 21st museum report [1871] should also be mentioned here.

From the foregoing it will be seen that the State Museum began to form its Indian collections when ethnology as a science was new. The same is true to a degree in archeology. In the early history of the museum, however, the artifacts of the prehistoric aborigines of the State were seldom or never mentioned in connection with the term archeology, but included under the general name of "antiquities." Although the New York Indian museum began before or at the same time when other museums were organized, the active interest in a measure ceased, largely perhaps because no one seemed available to continue field work in ethnology or begin field work in archeology. True, from time to time, articles picked up here and there or perhaps an entire collection were acquired, but only in few cases were accurate data given. While other archeological museums were pushing to the front making great advances, the archeological section of the State Museum fell behind and the collection became what Morgan first thought it would, merely "a memento to the red race which preceded us and but slightly enlarged the bounds of human knowledge."

#### PRESENT FIELD OF ETHNOLOGY IN NEW YORK

Long before the creation of the State Museum, the Algonkin tribes which once held the southeastern portion of the State had

passed beyond our borders and their descendants, if perchance they may be found, are too far removed in ancestry and from ancient domain and conditions to be able to tell us much of ethnic interest. The Iroquois who held most of the remainder of the territory remain, but during the past 40 years they have been stripped of their ancient heirlooms and treasured relics by collectors who have been silently busy. There will be no more harvests of the old products of Iroquois handicraft—we may only pick up a few scattered specimens that remain hidden in out of the way corners. The State for many reasons has been oblivious to the true conditions and not until 1896 was there an awakening when through the influence of Dr Melvil Dewey, Secretary of the Board of Regents, the following bill was drafted and submitted to the Legislature:

There shall be made as the Indian section of the State Museum, as complete a collection as practicable of the historic, ethnographic and other records and relics of the Indians of the State of New York, including implements or other articles pertaining to their domestic life, agriculture, the chase, war, religion, burial and other rites or customs, or otherwise connected with the Indians of New York.

The trustees of the State Museum shall appoint on its staff a competent curator, without salary, to make and arrange this Indian collection, and for his necessary expenses, and for collecting or buying specimens for the Indian collection, there shall be paid by the Treasurer, on the warrant of the Comptroller, from any money not otherwise appropriated, not to exceed \$5000.

The bill was passed and became chapter 586 of the laws of 1896. Then followed the activities of Mr A. G. Richmond who became honorary curator of the collection, and of Mrs Harriet Maxwell Converse. With the appropriation at service Mr Richmond purchased a series of collections from central and northern New York that today can not be duplicated. Among the collections are those of John S. Twining of Copenhagen, N. Y., of Charles F. Moseley of Bergen, N. Y., of William Lay and A. D. Crone of Honeoye Falls, N. Y., of W. S. Stone, Mt Vernon, N. Y., of Dr William G. Hinsdale, Syracuse, N. Y., and of L. Walter Ledyard, Cazenovia, N. Y. Active work in the field was done under the direction of Mr Richmond in the counties of Madison, Onondaga, Montgomery and Fulton and resulted in what is known as the de Clercq collection, from the Messrs de Clercq and Hall who did the excavating.

Mrs Harriet Maxwell Converse manifested her genuine interest by donating as a memorial to her father, Hon. Thomas Maxwell, a magnificent collection of articles of dress, domestic utensils, fabrics



and implements of war and the chase. Her value to the State was at once apparent as her influence and long acquaintance with the New York Indians placed her in a position to obtain from them many more objects of historic and ethnic interest. The articles which she donated and those which she purchased now form a collection of confederated Iroquois ethnological material which stands without rival in any museum, save by that of the Morgan collection within our own walls. It was largely through her influence with the New York Indians that, at the initiative of Secretary Dewey and A. G. Richmond, the historic wampum of the Iroquois were passed over to the keeping of the State. This proposition was placed before the Onondaga nation which after due deliberation passed the following resolutions:

*Resolved*, That the University of the State of New York be and it hereby is elected wampum keeper of the Onondaga nation, with full power and it shall be its duty to get possession of and safely keep forever all wampums of the Onondaga nation and the Five Nations and Six Nations and each of them.

Thus the University of the State of New York was unanimously elected to the office of wampum keeper.

The following resolution was also unanimously adopted:

*Resolved*, That the Onondaga nation does hereby sell to the University of the State of New York all wampums for \$500, and that the sachems and chiefs present all execute a bill of sale for the nation.

his  
[Signed] Say-ha-que Baptist (X) Thomas  
mark  
and 11 others.

With the passing of the Six Nations' archives into the keeping of the State came their formal presentation and acceptance at Albany June 29, 1898.

The following invitation was sent to carefully selected chiefs, sachems and head women of various tribes.

The University of the State of New York invites. . . as a representative of the Five Nations to attend the exercises of Indian day, June 29, at the annual University Convocation of the State of New York in commemoration and ratification of the appointment of the University as wampum keeper and of the deposit of the wampums in the State Capitol as part of the Indian museum recently established by the Legislature.

[Signed] MELVIL DEWEY, Secretary

Albany, 10 June, 1898

The day was set aside for both the formal opening of the Indian museum and for the ceremonies of presentation and acceptance. Of Mrs Converse's work, Secretary Dewey in his address to the assemblage said:

We have recently had most valuable assistance from Mr Edward Winslow Paige of Schenectady, who as well as Mr Richmond has for years been deeply interested in all that pertains to the Iroquois. Not least are we indebted to Mrs Harriet Maxwell Converse, who early and late has labored for the success of this museum, which will do so much to stimulate public interest in the Indians whom she loves so well, and in whose behalf she hesitates at no labor or sacrifice. With the singular felicity which has so often characterized the Indian names, she bears among the Iroquois, to whom she belongs by adoption, and in whose councils she holds a high and honorable position, the name Yaiewano, which means "she watches for us." Her work, of which it has been my good fortune to know not a little in recent years, entitles her richly to this name.

With the coöperation of such friends and the very judicious expenditure of the small sum appropriated, we have secured a splendid collection, which a few years later no money could buy, as the national and other museums are seeking to add to their own collections anything of so great ethnographic interest as the relics of the famous Six Nations. Among these, like the Sibylline and Doomsday books, infinitely the most precious were the wampums. Their possible destruction, loss or injury was feared alike by the red men and the white men who understood their value, and happily they saw alike that the most fitting place of safety in all the world would be this fireproof Capitol of the State. The proposition found favor and after full consideration was formally adopted by the Onondagas, with whom this responsibility rests, and the original papers constituting the University keeper of the wampums forever have been duly executed with all legal form and deposited in the archives of the State with the wampums themselves, which are exhibited here in the Senate chamber this afternoon.

It seemed to me that such an event deserves some more public recognition and that the members of the convocation who are intrusted with the conduct of the institutions of higher education of this great State would be glad to be present at what is doubtless the last great council of the most famous confederacy known to aboriginal times. It seemed especially desirable that delegates chosen by each of the nations should meet and formally and solemnly ratify the action of the Onondagas in making safe forever the most precious records connected with Indian history. Invitations were issued and sent to all the reservations. Councils were held in due form and delegates were chosen to share in this ratification. Through the courtesy of the New York Central Railroad, special cars were put at the disposal of these delegates. The Albany Historical Society with its accustomed liberality asked to share in the



welcome to this historic city, and provided a dinner for the delegates on their arrival this noon. The Albany City Railway courteously put at their disposal special cars and the senior members of the University staff who met them at the train have acted as their escorts, showing them through the University offices, the State Library, the Indian museum and the chief rooms of the Capitol. Rev. Dr Battershall, rector of St Peter's will extend the welcome for the city, Regent T. Guilford Smith, chairman of the museum committee, who has from the first shown the most active interest in the Indian museum and its welfare, will speak for the Regents. Mr Paige as the lawyer who drew the papers and who has carefully attended to all the legal details, will announce the transfer, and by special request Mrs Converse will speak to us briefly of the Iroquois women, among whom she is proud to take her seat here today. Then we are to hear, as far as time permits, from one or more representatives, of each of the nations.

By the provisions of a law which states that "all scientific specimens and collections, works of art, objects of historic interest and similar property appropriate to a general museum, if owned by the State and not placed in other custody by a specific law, shall constitute the State Museum . . ." the State Museum became the custodian of the wampums of the New York Iroquois. The Director of the Museum thus virtually holds the title of Official Custodian of Records and Wampum Keeper of the Six Nations of Iroquois of New York.

The collections secured by Mr Richmond and Mrs Converse came under the immediate charge of the Director of the State Museum and were installed in cases in the corridors about the western staircase, on the fourth floor of the Capitol. At this time Dr William M. Beauchamp, the well known authority on New York archeology, was engaged to write a series of bulletins describing the implements and ornaments of the New York aborigines and this series, now completed, has attracted widespread interest and has greatly stimulated archeologic research in the State.

With the sudden death of Mr Richmond in 1898, the Indian section of the museum lost its foremost worker. Field work in lines of archeology entirely ceased. Likewise the fruitful work of Mrs Converse which brought to the State treasured ceremonials, the medicine masks, silver crowns, brooches and hundreds of other objects of historic and ethnic interest was soon thereafter closed by death.

Time has slipped by. The Iroquois have become in a measure anglicized. Robbed of their forests and hiding places they have been pushed back in small corners called reservations and have

yielded up through necessity their old-time ways, and the modern substitutes for their ancient usages are often pitiful caricatures. For instance, in the council house upon ceremonial occasion, we find, not the buckskin legging, noisy with rattles of deer hoofs, nor the white doeskin body wrappings, symbolic with colored quill embroidery, nor do regal eagle feathers or white heron plumes wave from chieftains' heads, nor belts of wampum hang from war poles or long wampum strings dangle from the moving hands of speakers. Instead of these things, overalls of blue jeans, gingham jumpers, broad brimmed hats or tattered caps or perchance upon the occasion of the feasts some modern makeshift for the old-time requirements. This exhibition of departed glory is pitiful and pathetic; or if one should say this picture is of the "pagans" only and then not correct entirely, let us look at both "pagan" and Christian Indian upon other holiday occasions. Men, young and old, with kid gloves, stiff hats, stiff collars, stiff shirts, stiff shiny shoes; women, young and old, with kid gloves, feathery hats, rustling petticoats, lace shirt-waists, kid bootees. Some of these ultramodern Indians will not be found on the reservations but out in the strenuous white man's world struggling side by side with the pale invader as college students, teachers, nurses, clerks, accountants, engineers, electricians, newspaper men, athletic trainers, bandmasters, musicians, doctors, philologists, anthropologists and what not. And among these modern people of the ancient Five Nations one must conduct his researches in ethnology, folklore and philology. It is late, far too near the hour when a new epoch will dawn and there will be no more red men as such. Yet in the short time that remains it is our purpose to save at least a part of the tattered fringe of the ancient fabric that was, and from this small part learn something of its entirety. It will be apparent that as far as collecting ethnological material from the Indians themselves is concerned, there is little to be obtained, except slowly and in small quantities.

**The purpose of archeology.** Specifically, archeology is the science which relates to the conditions, culture and circumstances of prehistoric man. Man is a problem to himself. His remote origin, his ancestry, his early struggles for existence and his evolution are from the standpoint of science, things veiled and obscure. Man struggles to learn the causes which impel him to certain actions, the facts of his origin, evolution, distribution and development, in order to get a better understanding of himself as an individual and as a race. What man was has an important bearing on what man is and



a knowledge of what man is has an immensely important bearing on what man may be. The study of this story of man's development is termed anthropology and may be properly divided into three divisions, present anthropology which is ethnology, historic anthropology which is history or ethnography and prehistoric anthropology which is archeology.

Archeology has definite ends in view far more important than the mere aggregation and description of relics and specimens. What an archeologist finds is never a relic only, although for convenience sometimes termed so. His discoveries are specimens of certain human artifacts illustrative of some stage of culture or of some local development of that culture, and as such, are valuable primarily for what may be learned from them.

To those who are wont to rely upon the written records of history it may not at first clearly appear how much may be learned from such relics or how such things can have the import which the archeologist claims. Let it first be realized that early man has left upon the surface of the earth traces of himself by which his history may be materialized far more accurately than it might ever have been translated from a word-written document. We have become so accustomed to rely upon the testimony of word-made records, that we lose sight of the fact that words are but thought symbols, *ideaphones*, and ideographs, and that written records may be erroneous and incomplete while material objects may convey clearer meanings by which a much more accurate knowledge may be gained. We seek to know the man of prehistoric times, yet that man has left us few written documents by which we may read in words his thoughts and learn of his activities. He has done better, and we may know him notwithstanding. He has left pencilings upon the surface of the earth which he trod which neither rains, nor floods, nor the ravages of time have erased, save in spots, as a stray rain-drop might expunge a letter from a slate and yet leave the word still readable. For example, take the fire pit by which the ancient warmed his body and in which he cooked his meat, into which he cast the bones he could not eat and swept the refuse of his bower. That fire pit remains to this day to tell the story of the man who dug it. By the relics found within it, it tells us what he ate, what he wore, what trinkets he had, the beasts he killed, the weapons he used, how far advanced he was in the arts, how much and where he commerced, what grains he cultivated, what implements he made of stone and bone and shells and clay and of the fabrics he wove from

roots and grasses. We may even read his thoughts in his artifacts and know his sense of beauty and of accuracy, we may learn of his superstitions and personal habits and more things than these. None of his day left us the written record by which we know these things, but if by strange chance the wild raw story of man primeval or of his early descendants has been written on a parchment by his contemporary, it would have been destroyed by the accidents of time, or if it escaped, been laughed at as a legend; if preserved in symbols wrought on rock walls the crude ideographs would be unintelligible mysteries to the people of the later day. The age of stone in the State of New York has left nothing in the way of inscriptions by which the wondering steel age of now may know of it. It is better that it has left us in its fire and refuse pits, in its graves, in its monuments and earthworks a record far more satisfactory, enduring and truthful.

### THE FIELD OF ARCHEOLOGY IN NEW YORK

During the past 20 years tremendous strides have been made in archeology. Museums have been especially active. Questions that seemed incapable of solution have yielded to careful investigation.

Museums and collectors have found New York a most fertile field for archeological research and for years have carried beyond our borders thousands of specimens.

With the creation of the State Education Department and the installation of the present Director a new policy was instituted. An archeologist was engaged to examine the prehistoric and recent monuments of the aborigines and by exploration and excavation to obtain first-hand from original sources specimens to illustrate the facts of that occupation, to discover the various cultural areas and to collect from the Indian tribes yet residing in the State such material as should be properly contained in the museum series. The outcome of this policy has been the creation of the position of archeologist on the Museum and Science Division staff.

As a field for archeological research New York State presents one exceptionally inviting. Specimens discovered in different parts of the State evidence a number of distinct ethnic cultures of great interest. The various problems connected with these culture regions will form the subjects of special research. Nor will conclusions be formed hastily. Several years of active field work in each district will be done and the results embodied in reports or special bulletins.



*Prehistory* is our primary object. We intend if possible to bring into the intellectual grasp of the men of today the life and conditions of the various peoples who held the Empire State before us. To attain the highest results the cooperation of every citizen interested in history and archeology is invited. Information as to the localities of aboriginal occupation is highly desirable. Donations of collections accompanied by as complete data as possible are especially sought. It is our desire to keep in touch with every one interested in New York archeology and ethnology and any correspondence upon these or kindred subjects will ever be welcome.

### SOURCES OF INFORMATION

In New York State we may expect to obtain archeological data principally from the following named sources:

#### I GENERAL AREAS

- 1 Inhabited areas
  - a* Village sites
  - b* Camp sites
  - c* Shell heaps
- 2 Defensive works
  - a* Fort rings
  - b* Fort hills or points
  - c* Palisaded fort sites
- 3 Places of industry
  - a* Workshop sites
  - b* Quarries
  - c* Garden beds
- 4 Places for disposing of the dead
  - a* Cemeteries or burial grounds
- 5 Places of conflict
  - a* Battlefields
- 6 Routes of traffic and travel
  - a* Trails
- 7 Occasional or rare places
  - a* River gravels
  - b* Drift deposits
  - c* Swamps
  - d* River and lake bottoms
  - e* River and lake shores
  - f* Ceremonial districts and areas

## II PARTICULAR PLACES

- I Sites of dwellings
  - a* Lodge sites
  - b* Caves and rock shelters
- 2 Refuse deposits
  - a* Fire pits
  - b* Refuse pits
  - c* Refuse heaps
  - d* Shell heaps
  - e* Signal light ash deposits
- 3 Monuments
  - a* Mounds
  - b* Cairns
  - c* Inscribed rocks
  - d* Council rocks
- 4 Burials
  - a* Graves
  - b* Ossuaries
- 5 Places of industry
  - a* Kilns
  - b* Individual workshops
- 6 Places for storing or hiding things
  - a* Caches of implements finished, general
  - b* Caches of raw material; general
  - c* Individual caches
- 7 Ceremonial places
  - a* Springs
  - b* Spots

## DESTRUCTION OF SOURCES OF INFORMATION

Many of the most valuable sources for archeological research have been forever lost to the State and to the scientific world in general. Mounds and earthworks have been destroyed and leveled through the necessities of a commercial civilization that has taken little heed of things archeologic. Railroads and canals have cut through ancient sites and have thrown the priceless relics of aboriginal art in with the common dirt to be used for roadbeds or for grading; farmers, not realizing their vandalism, have scooped down earth walls and mounds to level their land for agriculture; manufactories, towns and cities have been built over the site of Indian villages and burials, and not less lamentable has been the work of ignorant col-



lectors who with a single passion — a greed for relics — have spaded over sites, overturned mounds and desecrated graves, merely to gratify their desire to find some new curiosity and add it to their collection. Such collectors have seldom preserved in writing the circumstances of the find or even the most meager information, and their collections are usually only a heap of stones almost worthless scientifically except as an exhibition of some indefinite Indian art. More enlightened collectors, realizing the differences in culture in different regions, and bearing in mind the various problems of American archeology have done their work conscientiously and with care, preserving a record of their finds, and are to be commended for their work, especially when they have finally placed their collections in the keeping of some scientific institution where its value would be appreciated. The breaking up and scattering of a collection is the breaking up and destruction of just so much knowledge. With the increase of population and the growth of towns many more sites will be obliterated and their value lost forever. It is therefore for us of today to rescue and preserve, while there is yet time, for the people of tomorrow the prehistory of our State and to secure for it the relics of that prehistory.

#### METHODS OF COLLECTING ARCHEOLOGICAL MATERIAL

Assuming that a given territory was inhabited anciently there are two ways of discovering and preserving the circumstances of that ancient occupation. The first method is to collect and study its traditions, and the second is to make a systematic study of the visible relics of that occupation. While traditions may not always be truthful, they are not without a certain value. Often they furnish clues that lead to important discoveries. Often a discovery substantiates a tradition or a tradition explains the presence and use of certain things peculiar to a region. If a tradition is entirely without foundation in fact it is still interesting for it reveals what men assumed or affected to be true.

The second method by presenting actual objects from which conclusions may be drawn is the more reliable and universally so recognized by modern archeologists.

Archeological material is collected for two distinct purposes; first, to increase knowledge, and second, to illustrate and diffuse knowledge.

Three methods of accomplishing these objects are employed by people or institutions interested in archeology. The first method,

the most primitive, is the collecting of relics secured in a casual way, and since it aims simply to amass the various objects used by the early races for preservation, it may be called the *preservation method*.<sup>1</sup> Inasmuch as the objects are secured by those unfamiliar with the requirements of scientific archeology, it is natural that they should be those most attractive to the eye, the less striking things being passed over as unworthy of preservation if not overlooked entirely. This method, now obsolete in progressive institutions, is one that has been employed by people with whom collecting was only an incident or by historical societies that have sought to add archeological material to their collections of antiquities. The second method, called the *synoptic method*, is a systematic attempt to procure in any way specimens to illustrate the known facts of archeology. The third method is termed the *research method*. By this method the archeologist aims to obtain material first-hand from original sources, such as mounds, camp and village sites and earth-works of various kinds. Such sites are carefully and systematically excavated and all the accompanying objects secured. Painstaking records are kept and every fact that might be of value noted in record books. The methods employed in the field by the State Museum exemplify the workings of this system.

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<sup>1</sup>For this nomenclature the author is indebted to *Methods of Collecting Anthropological Material*, by Harlan I. Smith.



View looking northwest over Dewey Knoll toward Lake Erie





*Part 2*

## RECORD OF EXCAVATIONS AT RIPLEY

**A foreword**

It is not designed in this account to present an exhaustive treatise on the Eries or of the various classes of objects discovered. Our purpose is merely to set forth an account of the work as it was done and briefly describe the specimens found in the course of exploration, adding such supplementary matter as may be of immediate importance for a proper understanding of the operations and the results. The record of this expedition with those which have preceded it and those which follow in the Erie region will form the base of a special work on the Eries and in that work the various Erie sites in New York and Erie artifacts will be fully discussed. This account, therefore, is to be regarded as a report of progress rather than as a complete and final treatise.

**General region**

Along the southern shore of Lake Erie between Westfield and State Line, and extending east and west from these points, is a high bluff of Chemung shale rising almost sheer from the water. In various places it is from 15 to 65 feet above the lake level. It forms a most effectual barrier to those who might wish to reach the land from the water or the water from the land. The soil above the shale in general is a loose water-washed sand and gravel beneath which is a substratum of Erie clay which outcrops at denuded places. In this lake border region are numerous springs and brooks. Two miles back from the lake rise the steep Chautauqua hills which form the watershed that sends the streams on the south into the Allegheny and its tributaries and finally into the Gulf of Mexico and those on the north into Lake Erie and finally into the Gulf of St Lawrence. This region by reason of its physical features afforded an ideal retreat for the tribes of men who found their way there after the subsidence of the great glacial lakes, which receding left their shore lines far inland as terraces and hills and their beds as fertile undulating plains.

Traces of early occupancy are found here. On the sites of ancient marshes are found the bones of the mastodon and with



them fire-cracked stones and charcoal, evidence, it may be, of man contemporaneous with the American elephant. There are sites which yield the monitor pipe, others that yield the polished slates called banner stones, gorgets and bird-shaped stones and the notched flints far different from the flints shaped by later comers. That the people who made these things were of the American race is evident, but of what tribe or stock is a question yet to answer. Neither is there yet any way of discovering who their descendants of today are, if perchance their blood yet flows in human veins at all. At a later period a new stock of people invaded the region but whether they found it inhabited or whether there was a struggle in which the old race was expelled is merely a matter of conjecture now. Evidences of the wide distribution of these old people seem to preclude the theory of their utter extermination and it seems more probable that they became absorbed by their conquerors or became expelled to regions where their environment changed their culture.

The later invaders who displaced the builders of the mounds and makers of polished slate implements seem to have been some early branch of the Huron-Iroquois family. Their territory is characterized by the earth walls and inclosures which they left and by the pottery and triangular arrow points which are never found on earlier sites untouched by other occupations. The early Iroquoian sites are still further differentiated by the ossuaries which are found upon many of them. Later this territory came into the possession of a people whom we recognize as the Eries, a branch of the Huron-Iroquois, but a people whose culture differed from the earlier Iroquoian peoples of whom they are without doubt the descendants. After the expulsion of the Eries in 1654 the region remained uninhabited save by wanderers and hunters and not until after the Revolutionary War did it become the hunting grounds of the Senecas who had trails through it, one of which passed close to the Erie site at Ripley. Over this trail the Senecas for years traveled on their way to the settlements on the Sandusky in Ohio. Another great trail extended down what was once the Portage road to Chautauqua lake. It began at Barcelona harbor.

There have been noted numbers of sites of aboriginal occupation east of a meridian line drawn through Chautauqua lake and touching Lake Erie on the north and the Pennsylvania line on the south. West of this line, from the archeologist's standpoint, lies a practically untouched region, a strange fact since it presents an exceptionally inviting field for investigation, being as it is, the borderland between the territory of the tribes of Iroquoian stock and the

culture region of that mysterious people for the sake of convenience termed "mound builders."

### RIPLEY SITE

For a number of years the writer had known of a site in this locality, one on the lake shore 2 miles northwest of Ripley, but until this season had not had occasion to visit it. In 1900 it was reported to Mr. M. R. Harrington and the writer by Prof. John Fenton, when we were assistants on the archeological staff of the American Museum of Natural History. Mr Harrington did some work on the site in 1904 for the Peabody Museum of American Archeology and Ethnology, but, because of various obstacles, left the major portion untouched. The excavations which he made during his short stay revealed the fact that the site was a most prolific one. In view of the fact that the State Museum of New York had few or no specimens of the Erie culture, and, indeed, as very little was known of this culture, the site was chosen as the field for the season's operations and a leasehold obtained. The Ripley site is situated on the William and Mary Young farm in lot 27, Ripley, Chautauqua county. It covers an elevation locally known as "Dewey knoll" situated on the cliffs of Lake Erie. On the east a stream has cut through the shale and eaten down the bluffs to the lake level so that a landing is easily effected from the water. This landing is one of the few between Barcelona harbor and the mouth of Twentymile creek in Pennsylvania where there is easy access to the land on the bluffs above. The stream has cut the east side of the knoll so that for several hundred feet south from the lake the bank rises steep and in places almost sheer from the creek bed. The place is one, therefore, naturally adapted for a fortified refuge and must have been an attractive spot indeed for the aborigines who built upon it a village, a circular earthwork and who found in the soft sand a most suitable place for the burial of their dead.

### Surface features of the site

The site was found to be mainly on the level top of the knoll although a number of graves were found on the south and west slopes. The "unoccupied soil" began at the lake bank and ran back inland to the southern slope. The soil bordering the bank line was a light sandy loam heavily intermixed with carbonaceous substances, animal phosphates, vegetable mold and particles of animal bone. Back to the south it was generally a light shifting sand which rested upon a more compact stratum. At places, especially a few feet



down the slopes, the clay stratum outcropped. Here the soil was bare or only sparsely covered with grass.

The entire knoll was covered by a peach and plum orchard (since uprooted) and it was between the rows of trees that work was carried on. The owner naturally objected to carrying the excavations too near the roots and thus it was sometimes impossible to take out a skeleton or to open a pit when it lay beneath a tree. In such cases slanting shafts were sunk beneath the roots and the pit examined. This was a somewhat dangerous operation as sometimes the overlying sand would cave down and engulf the curious but incautious archeologist who after a time would be rescued by his assistants.

Preliminary post holing over the knoll soon revealed the character of the site, and in consequence it was divided into two sections, the village and the burial. Parallel and adjacent trenches were staked out and the lines run as far as post holing and surface indications revealed a disturbance or modification of the soil by its former occupation.

### Surface evidence of an occupation

The surface evidence of an occupation in that portion of the site afterward found to be the village section was pronounced. The ground was strewn with heat cracked stones, fragments of shale anvils, broken flint nodules, with here and there a fragment of weathered pottery hidden amongst the roots of the tall grass. The luxurious growth of grass in patches when surrounded by a scantier growth points out a spot of soil enriched by some abnormal agency. The rank thick grass and clover here in the village site was conspicuous and pointed out the presence of occupied soil or "Indian dirt" as archeologists sometimes term it. Except on the western slope, the burial section of the site revealed no trace of its character. On this hillside where the elements had washed down the loose sand some of the graves were left so near the surface that the skeletons had been thrown up by the plow. The broken and crumbling bones, however, would hardly be recognized by the ordinary observer as human remains. Other than the bits of human bone on the surface there was no external indication where graves were located, unless it were conjectured that if graves were to be found at all they would be in the soil most easily excavated.

### Village section

The village section occupied the level top of the knoll bordering the lake bank and ran back south on the west side about 200 feet

Plate 2



Fig. 1 Looking over the northeast side of the knoll. Access to the land from the lake is from the mouth of the creek

Fig. 2 View over the falls looking toward the mouth of the creek and the lake





and on the east side to the declivity that formed the bank of the eastern hillside. This bank ran at nearly right angles to the knoll proper, the whole eastern slope forming an arm that sloped down to the level just above the creek. On the southern bank of this arm were refuse dumps. The east arm was post holed at intervals of a rod, 220 holes being dug. Hardly a sign of occupancy was found except near or along the level. There was no "occupied soil" or "Indian dirt," the soil being in general a stiff clay mixed with sand and gravel and much more compact than the top soil on the level.

An examination of the surface of the village site led to the discovery of a circular earth belt, a part of which was cut off by the



Fig 1 View of cliffs at northeastern end of the village site. Every year as the frost and water wear down the shale the earth above slides down into the lake exposing pits and relics. A recent landslide is shown at X in the picture.

lake bank. On either side of this earth ring were pits and occupied soil. The signification of this belt is discussed hereinafter under the title "Significance of some of the data."

#### Diminution of the village plot by the encroachment of the lake

It is highly probable that most of the village site has been lost by the encroachment of the lake, which eating down the shale cliffs caused land slides [text fig. 1]. Certain it is that land is lost in this

way each year. The belief that a part of the occupied area has disappeared is strengthened by the fact that this section is small in comparison with the rest of the site, by the fact that the occupied soil exposed at the bank is deep, by the fact that the bank line intersects a part of the circumference of the circular earth belt and by the fact that the exposed bank shows all along the level top the exposed occupied soil and pits. It is probable that originally there was considerable space between the shore side of the circle and the bank and that a part of the village occupied that space. Village sites upon hills generally extended to the edge of the declivities and if we can establish where the bank line was at the period of the occupation we may say how far the village probably extended. To establish accurately this line is a difficult matter but inquiries led to the information that from 6 inches to a foot of land was lost each year. Using this assumption as a datum we may hypothecate that the site has lost at least 150 feet since the time of its occupation. The date of this occupation is discussed elsewhere.

#### Method of excavating in the village section

The village section was staked out in parallel and adjacent trenches 16 feet wide. Excavations were commenced at the wire fence 20 feet from the shore line. A sectional trench 3 feet wide was dug and the dirt thrown back. This left a cross-section of the trench exposed and the 3 feet of floor served as a working space. The archeologist examined this cross-section and if indications pointed to the probable presence of objects he troweled into the bank, allowing the earth to fall to the floor until it had filled when it was removed by a laborer. If the indications pointed to a barren spot the workmen spaded ahead until signs of disturbance again appeared when the section was again examined. When a pit was discovered a clean working space was made and the pit vertically exposed at one side. The pit filling was then troweled from top to bottom, great care being taken not to break the specimens that might come to light with any trowel stroke. As the work progressed measurements of the pit were taken and all the important specimens labeled and placed in trays for subsequent numbering. The refuse material such as animal bones, potsherds, flint chips and rude implements were placed in labeled bags. A diagram of the pit was drawn and the details of its excavation recorded in the trench book. Trenching was continued until the trench became barren when another trench was worked.



Every pit, pocket or post hole was charted, the varying character of the soil and the manner of its disturbance was noted and it is possible for any one familiar with our methods to take a specimen from the collection and after examining its number and referring to the records, point out on the map or on the actual site itself exactly where that object was found.

To insure accuracy in field records, three of a different kind were made, so that any circumstance omitted in one might be found in one of the others. The first record was made in a "trench book" and written as the actual work progressed; the second record was made on data slips and supplemented the trench book in the matter of measurements, locations, positions etc. of trenches, pits and objects, and added the details of the particular thing described on the slip; the third was a survey record, in which every pit, grave or trench cutting was charted to a degree of mathematical exactness. All these records are supplemented by drawings, diagrams, maps and photographs.

### Method of excavating graves

The burial section was staked out in the same manner as the village section. The workmen in excavating removed the disturbed top soil for a distance of 3 feet leaving a working space of 3 feet by 16. Excavations were continued until signs of deeper disturbance appeared. These "signs" were foreign substances in the regular strata, such as fire-burned stone, flint chips, charcoal and lumps of clay. Earth of the character here found once disturbed is never as compact again as originally and even if there were no intruding substances in the sand its very looseness as distinguished from the rather compact sand surrounding it was a sign of its disturbance. The top soil over the grave was removed and its outline ascertained. The superincumbent earth was removed for a foot, and a depth of 6 inches below explored for signs of the grave bottom, and if not found the earth for another 6 inches was shoveled out with great care, the shovel scooping up the earth rather than spading into it. The trowel was used again to dig down and the process repeated until the skull or pottery vessel top was reached. The soil was then removed carefully with trowels. The skeleton and grave bottom were cleaned with fine pointing trowels and finally swept with a brush, care being taken not to move any bone or other object in the grave. A diagram of the grave and its contents was made, the exact position of these objects

ascertained by means of a compass and tape. The dimensions of the grave, its number and position in the trench and the character of the soil and other items of importance were recorded in the field book. If the burial was of sufficient interest photographs from one or more positions were made. The skeleton when removed was wrapped in excelsior or cotton and placed in a labeled box but not finally packed until dry. The objects found in the grave were placed in a tray with a proper label and afterward marked with the serial field number, this number being distinguished from the museum serial by prefixing the letter "F." Data slips numbered to correspond with the specimens were filled out and give all the necessary details. Any information not found on the slip may be found in the field record. The various records thus countercheck each other.

#### Extracts from the trench book describing the pits in the village site

The trenches in the village plot began at the wire fence that ran parallel to the edge of the alluvial cliff and 20 feet from it to the south. No excavations beyond a few post holes back of the fence along the bank were permitted by the landowner who believed that should the soil be broken and the bushes uprooted the earth would slide down the bank and thus the loss of his land would be unduly accelerated.

#### *Pits in the village site*

Pit 1, trench 1 at 5' on the east side was a refuse pit evidently filled with the sweepings of the lodges that were near it. The pit was circular, 8' in diameter and 42" deep. It contained the split and cracked bones of deer, bear, elk, beaver, various fish and birds and also fragments of the shells of *Unio complanatus*. In the pit soil among the refuse of fire-broken stones, charcoal and ashes were 9 bone beads, that is, polished sections of cylindrical animal or bird bones. The pit filling was an almost uniform black from top to bottom where there was a yellow clay-mixed sand through which the pit soil had not drained. In most pits the soil at the sides and beneath is ramified by worm and rodent holes which have allowed the black carbonaceous pit matter to percolate to a depth often much greater than the original pit bottom. For this reason pits often appear much deeper than they originally were. Here, however, there was a sharp line of demarcation between the modified pit filling and the undisturbed bottom beneath.

SKETCH MAP OF THE  
ERIE INDIAN VILLAGE AND  
BURIAL SITE ON THE  
YOUNG FARM, RIPLEY, N.Y.

BY  
ARTHUR C. PARKER

BY  
ARTHUR C. PARKER





Pit 2 was discovered just south and west of pit 1. It was a circular depression 10' in diameter and 4' deep. It was a solid pit, that is it was not divided by layers of sand or other substance different from the general pit filling. The soil was a uniform black from its admixture with carbonaceous matter. There were numerous fire-broken stones in the pit, also animal bones, flint chips and potsherds.

The implements found in this pit are 2 rude bone awls, F259, 256, 5 tubular bone beads, 1 finely formed bone awl, F260, 2 "jewel" bones from the head of a sheep-head perch, F290, 291.

Pit 3 in trench 1 at 16' in the middle was 12½' in diameter and 37" deep. It was separated from pit 1 by a rather hard layer of topsoil as if this area had not been disturbed until much later than the other trench layer. This area was bounded by pits 1, 2 and 3 as may be seen by consulting the map and possibly was a lodge site.

At 12" from the surface standing upright with the point down was an antler chisel or pick [see pl. 35, fig. 4]. The handle or blunt end seemed to have been cut with a metallic blade. Three bone beads, F261, 262, 263, were found lying in the bottom of the pit end to end. Three others were discovered at 12" beneath the surface but separated. Near the pit bottom was a bone awl, F271, an arrow point of the long narrow type sometimes called fish points, F267. At 18" below there was a shell bead of the old type, F289 [see pl. 36, fig. 6].

Pit 16 in trench 1 was at 36' in the middle and was the next pit in the trench after pit 3. Between these pits there seems to have been a lodge site because there were a number of post holes that seemed to outline one. The top dimensions of this pit were 4' by 5' and the depth 24". The pit was divided into two strata, the dividing stratum being a layer of sod soil 2" thick. The upper stratum contained a quantity of deer and fish bones, potsherds and a few fire-broken stones. At 9" below the surface, just below plow depth, was found a portion of a copper wrist band [see pl. 37, fig. 4]. Near it was a rude bone awl. The copper bracelet was the first indication of European contact found in the site.

Pit 17, trench 1, at 35' on the west was separated from pit 16 by a distance of about 2'. It was 3' by 4' in top dimensions and 24" deep. It contained some large potsherds and pieces of decorated rims. Near the bottom was a small pottery vessel having high raised points at opposite sides, F298 [see pl. 28, fig. 3]. Beneath it was the complete skeleton of a fish. At one side of the pit was

a deposit of nearly a quart of *Helix alternata* and *albolabris* shells.

Just beyond this pit in the general occupied layer, 10" below the surface was found a hand-hammered nail bent in hook shape. The nail was perhaps intrusive though its shape suggests aboriginal use.

Pit 18 on the east side of trench 1 at 37' was a small pocket about 2' in diameter and 24" deep. A bone awl and a pitching tool of antler were found below the surface at 18".

Pit 19 on the west side of trench 1 at 48' was a small pocket 2½' in diameter and 48" deep. The pit soil was black from the charcoal and ashes. Awl F242 was found in this pit.

Pit 20 at 46' on the east side of trench 1 was an ash pit 3' by 4' in circumference and 30" deep. The pit filling was uniform in character being an ash and charcoal mixed sand. Besides the usual quantity of animal bones, fire-broken stones and flint chips was found a hammer stone and the shell of *Unio complanatus*.

Pit 21 at 49' on the east side of the trench was 7' by 10' in dimensions and 16" deep. It seemed distinctly a refuse pit or lodge dump. It contained fire-broken stones, cracked and split deer, bear, beaver, rabbit, muskrat and skunk bones, also the bones of fish, charred corn and hickory nuts and one *Unio* shell. The following named implements were found intermixed amongst the pit refuse: 1 antler hoe or digging tool, F292 [pl. 35, fig. 1], 3 bone awls, F307, 308, 5 bone beads, F248 to 252 inclusive, 4 bone beads, F303 to 306 inclusive, 1 notched pendant, F301, 1 broken implement of deer's jaw, 1 broken bone needle, F302, 1 flint blade, F309, 1 discoidal shell bead, F300, 1 net sinker and 10 periwinkle shells.

Pit 26 in trench 1 at 77' on the west side was a small pit 36" deep. The pit refuse consisted of potsherds, charcoal and ashes. One pipe stem of clay and an entire stone pipe bowl, F246, were found in this pit. The pipe was in the ash layer 11" below the surface.

The space intervening between pits 19 and 21 was hard and rather less disturbed than the surrounding earth, especially in the space between five post holes, as shown on the pit diagram. This space seems to have been a wigwam site.

Pit 27 at 75' on the east side of the trench was a small depression. It contained the usual fire pit refuse and within it were found a flint perforator, a broken bone awl, a "lap stone," a pitted slab of shale and numerous animal bones. There was a deposit of *Helix* shells.

For 20' beyond pits 26 and 27 the soil was barren of pits. The



# Plate 4

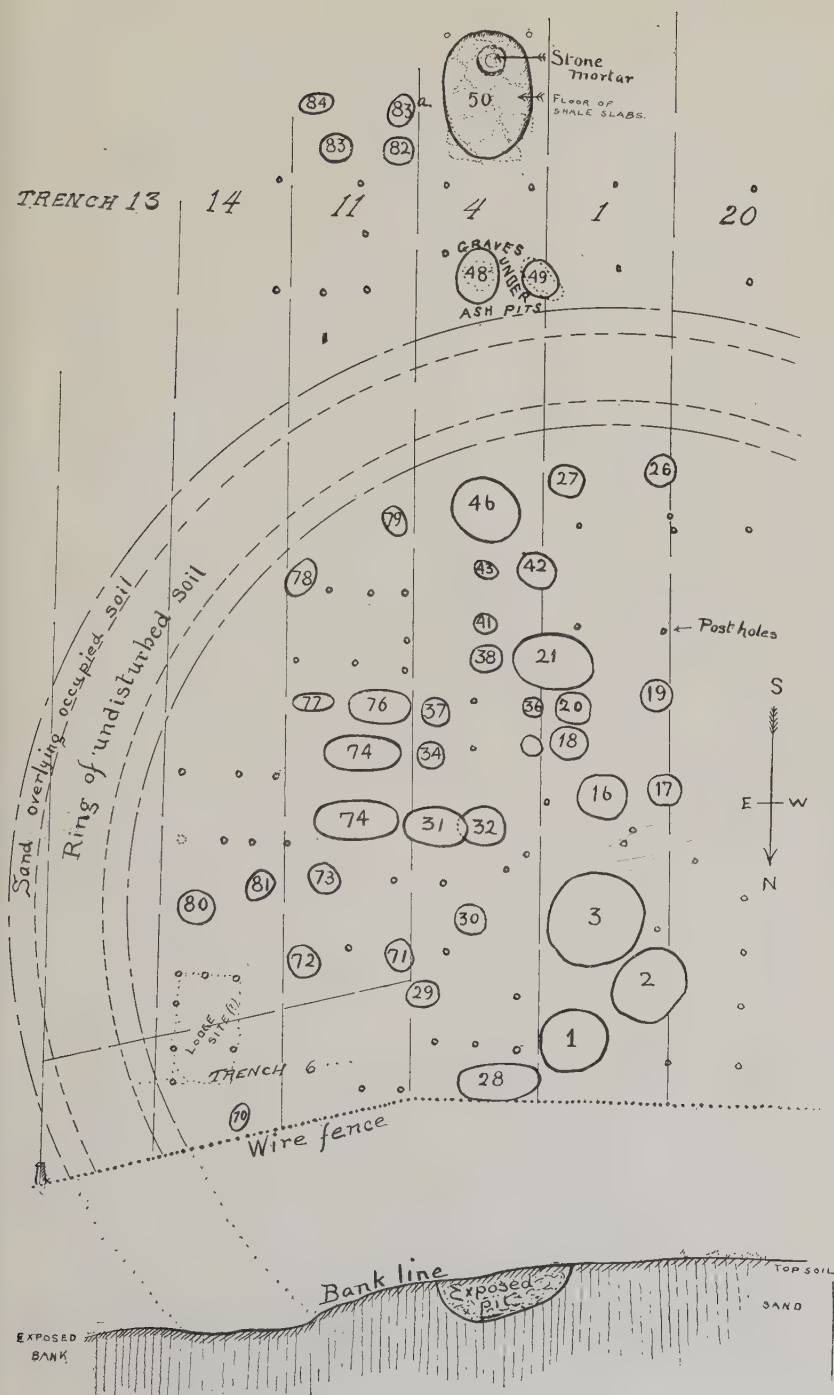


Diagram of the pits examined in the village section



trench soil at 40' from the beginning was hard and compact with no occupied soil appearing.

Pit 28, discovered at the commencement of trench 4 on the west side was 18 feet from the lake bank. It was a trenchlike pit 10' 4" long east and west, 4' wide and 52" deep. It was filled with animal bones, deer and beaver, and other refuse. In the pit were found 4 bone awls, F274 to 277 inclusive, 5 bone beads, F278 to 282 inclusive, 4 incised bones, F284 to 287 inclusive, 1 bone needle fragment and 1 *Venus mercenaria* shell.

Beyond the pit and ranging from pit 1 in trench 1 to the trench line on the east were three post holes in a line. The soil beyond these post holes appeared to have been a part of a lodge floor.

Pit 29 was discovered at 12' on the east side of the trench and it ran over on the east into the adjoining trench. It was a small ash pit 3' by 4' in dimensions and 48" deep. The objects found were 1 bone bead, F256, 1 bone shuttle or bodkin, F245 [pl. 34, fig. 21], and 1 bone needle fragment, F243.

Pit 30 was a small shallow pit in which a quantity of elk bones had been buried. It was found in the center of a "lodge floor."

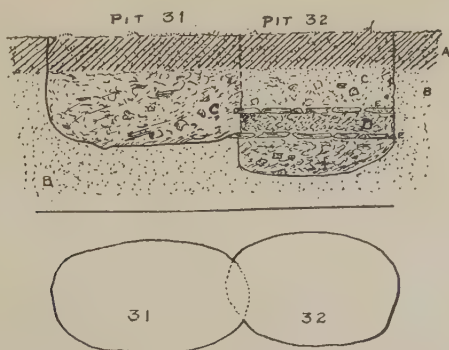


Fig. 2 Diagram of intruding pits 31 and 32. A = Top soil; B = Undisturbed sand; C = Disturbed sand and loam; D = Interlying stratum of sand between EE; EE = Floors of shale slabs

Pit 31 at 43' in trench 4 was 5' by 8' in top diameters and 28" deep. It contained a quantity of animal bones and potsherds. In this pit were found awl F268, bone bead F247 and terra cotta pipe bowl, F244 [text fig. 24].

Beyond this pit was a "lodge floor" and several post holes.

Pit 32 at 42' on the west side of trench 4 intruded pit 31 [text fig. 2]. It was 5' by 6' in top dimensions and 72" deep. The pit was in three strata separated by layers of flat stones. The middle



and bottom strata were heavy deposits of ash and charcoal in which were numerous animal bones, pot fragments and flint chips and fire-broken stones.

The objects found in the layer directly beneath the top soil and overlying the first floor of stone slabs are: 1 small celt, F200, 1 rude celt, F201, 7 bone awls, F202 to 208 inclusive, 7 triangular flint projectile points, F209 to 211, F211a to 214 inclusive, a quantity of charred corn, F140, 1 short rectangular iron bar, F226 and an iron-stained pebble found in contact with the bar, F241. In the bottom layer were found, 1 bone bead in process, F215, 5 bone beads, F216 to 220 inclusive, 1 triangular flint point, F221, 2 pot rim points F222, 223, 1 fabric-marked sherd, F224, 1 bone plug, F225. An animal bone evidently gnawed when fresh, F363, was also found in the bottom layer.

Pit 34 was a solid ash pit 4' 4" by 5' in top dimensions and 48" deep. It contained a quantity of animal bones among which those of deer, rabbits, beavers, heron and sturgeon were identified.

The artifacts found are: 1 hollow handlelike bone, F227 [pl. 33, fig. 5], 1 antler chisel, F228 [pl. 35, fig. 2], 1 fragment of perforated turtle shell, F229 [pl. 32, fig. 11], 1 conical worked phalanx, F330 [pl. 32, fig. 4], 1 deer bone rubbed and shaped, 1 awl, F231, 4 triangular points of flint, F232 to 235 inclusive, 2 pot rim points, F237, 238, 1 bear tooth, F240.

Pit 35 was a small pocket at 45' on the west side of trench 4. It contained a few animal bones, an antler stub, 1 bone tube, F311, 1 bone needle fragment, F312, 2 bone awls, F313, 314, and 1 flint knife.

Pit 36 in trench 4 at 50' on the west side adjoined pit 20 in trench 1. It was 34" in diameter and 36" deep. It was filled with the ordinary pit soil in which were found cracked deer bones and a few potsherds.

Pit 37 in trench 4 on the east side was directly south of pit 34 and on its east side adjoined another pit that ran into the next trench (afterward found to be pit 76). This pit was circular at the top, 3' 8" in diameter and 30" deep. In the pit filling were a few split deer bones and the fragments of several broken pottery vessels.

Pit 38 in trench 4 at 55' in the middle of the trench was a small ash pit 3' by 4' in top dimensions and 32" deep. The articles found in this pit are: 1 section of an incised antler, F172, 1 worked bone, F194, 1 bone awl point, F198.

Pit 41 in trench 4 was directly north of 38 and was separated

from it by a space of 3'. This pit was 28" by 34" in top dimensions and 28" deep. The bottom was filled up to 18" from the top with shale slabs. Resting within the pit filling upon the fragments of shale were 2 "lapstones," several "rubbing stones" and a quantity of broken pottery. There were 2 bone beads, F320, 324.

Pit 42 in trench 4 at 65' on the west side was a small ash pit 4' by 5' in diameter and 24" deep. It contained the following named objects: 1 phalanx cone, F196 [pl. 34, fig. 8], 1 bone awl, F323, 1 large bone awl, F325, 1 pot rim point, F329, and three deer phalanges, F317, 318, 319.

Pit 43 in trench 4 at 65' in the middle of the trench was a small pit 2' by 3' in top dimensions and 30" deep. It contained a quantity of bones and the fragments of a broken pot.

Pit 46 in trench 4 in the middle at 75' was 8' by 9' in top dimensions and 26" deep.

Buried with the animal bones, broken stones and potsherds with which the pit was filled were the following objects: 1 perforated *Unio complanatus* shell, F321 [pl. 36, fig. 5], 4 deer phalanges, F317, 318, 319, 332, 1 bone bead, F326, 2 sheep-head perch ear bones and the fragments of a large pottery vessel.

Pit 48 at 99' in the middle of trench 4 was an ash pit containing the usual refuse material of animal bones and fire-cracked stones. In the bottom of this pit was a skeleton. This pit is further described in grave XXIII, pit 48.

Pit 49 at 100' on the west side of trench 4 was an ash pit 4' by 5' in top dimensions and 42" deep. It was filled with quantities of ashes, charcoal and fire-burned stone. In the bottom of the pit was the skeleton described in grave XXIV, pit 49.

Pit 50 in trench 4 at 121' covered almost the entire width of the trench, being 11' wide and 15' or 16' long. Between this pit and pits 48 and 49 just previously described were a number of post holes and indications of a lodge floor. Pit 50 was in two strata divided by a layer of flat stones. The top stratum which was crammed with animal bones, split and cracked, potsherds, flint chips, and fragments of heat-cracked stones, was 24" deep. Upon the slabs of shale at one end was a large stone mortar, F358. Other objects found were 2 bone awls, F357, 1 pitching tool, F359, 1 hammer stone, F361, 3 bone beads, F352, 353, 354, 1 triangular arrow point, F356, 1 polished raccoon penis bone, F355c [pl. 34, fig. 18], 1 flint scraper, F351, 2 bone awls, F349, 350, 1 grooved bone implement, F348 [pl. 34, fig. 13].

Stratum 2 beneath the stone floor was 22" deep. It contained more ashes and less animal bones than the first. The following articles are from this deposit: 1 smoothed bone, F347, 3 pot rim points, F344, 345, 346, 1 triangular flint point, F343, 1 antler implement, F342, 1 perforated wolf's tooth, F341, 1 spatulate bone, small, F362 [pl. 34, fig. 12].

Pit 53 in trench 3 [see burial section map] was the first ash pit found in this trench and the first beyond the border of the burial ground. It was similar to other ash pits and contained the split and cracked bones of deer, bear, muskrat, beaver, heron and various fish. The only worked article found was an antler cylinder.

Pit 55 in trench 7 was an ash pit on the eastern slope of the knoll. It was irregular in dimensions but approximately 6' by 7' and 30" deep. It contained a quantity of elk bones, deer bones, including a skull top, and a few beaver bones. The artifacts are 1 perforated elk's tooth, F363 [pl. 34, fig. 2], 2 bone beads, F364, 365, 1 bone pitching tool, F367, 1 antler hoe, F368, and 1 yellow jasper arrow point.



Fig. 3 Elk bones from pit 55, cracked and split for the marrow

Pit 66. See Burial XXXVIII, pit 67.

Pit 70 at 20' on the north side of trench 6 was 2' by 3' in dimensions and 30" deep and contained the ordinary pit refuse. The following named objects were found: 1 bone awl, F378, 1 awl point, F379, and 1 incised beaver tooth, F382.



Pit 71 on the west side of trench II at the beginning was  $3\frac{1}{2}'$  by  $4'$  and  $43''$  deep. It was filled with discolored sand with which were intermixed carbonized substances. A few cracked deer and bear bones were found and 1 bone awl, F381.

Pit 72 on the east side of trench II at  $6'$  was  $3\frac{1}{2}'$  by  $4'$  and  $24''$  deep. In it were found the bones of deer, bear, beaver, turkey, heron and various fish but no implements. The top soil above and around pit 72 was black and otherwise discolored. Between this pit and 73 the black soil was  $20''$  deep but contained no intrusive objects.

Pit 73 at  $16\frac{1}{2}'$  in trench II on the east side was  $3' 9''$  by  $3'$  in top dimensions and  $34''$  deep. It contained a quantity of deer, rabbit and beaver bones, a *Unio* shell, a large broken pot and 1 bone awl. The ash deposit was not heavy.

Pit 74 at  $20'$  on the west side of trench II was  $10\frac{1}{2}'$  by  $5\frac{1}{2}'$  in top dimensions and  $32''$  deep. The pit refuse consisted of potsherds, various bird and fish bones, deer, bear and beaver bones, fire-broken stones, flint chips and charcoal intermixed with the sand and ashes that formed the major portion of the pit filling. The following objects were found: 3 bone awls, F394, 395, 380, 1 smoothed phalanx, F396, 1 pipe stem, F397, 1 large bone awl, F399, and 1 rude awl, F400.

Pit 75 at  $30'$  on the west side of trench II was an ash pit  $10'$  by  $4' 6''$  in top dimensions and  $30''$  deep. It contained the bones of sturgeon and various other fish, bird bones, deer, beaver, and skunk bones and several *Unio* shells. The following articles of human manufacture were discovered: 1 smoothed deer phalanx, F388, 1 bird bone awl, F389, 1 flat deer bone awl, F390, 3 rude bone awls, F391, 392, 393.

Pit 76 at  $35'$  on the west side of trench II was  $8'$  by  $4' 2''$  in top dimensions and  $20''$  deep. It was in two layers separated by a dividing layer of sand. The first layer was a foot deep and the second 7 inches. The dividing layer was an inch in thickness. The objects found were: 1 worked deer phalanx, F385, 2 polished bone beads, F386, 387, 1 elk molar, 2 *Unio* shells, 1 beaver tooth and 1 cut bone.

Pit 77 at  $39'$  on the east side of trench II was a two-strata pit with a top diameter of  $2\frac{1}{2}'$  and a depth of  $30''$ . The topmost layer was  $18''$  in thickness and rested upon a dividing layer of sand beneath which was a deposit of ashes about a foot in depth. The top layer contained a large number of deer bones. In this layer

was found 1 flattened ball of antler [pl. 35, fig. 6] and a small edged pebble, F401.

Pit 78 at 55' on the east side of trench 11 was 3' by 5' in top dimensions and 30" deep. It contained a large number of cracked deer bones and scattered through the refuse were the following named articles: 1 serrated deer rib, F402 [text fig. 21], 1 worked bone, F403, 1 scratched and gnawed deer's femur, F404, 1 chisel-edged pebble, F405, 1 celtlike tool made from a pebble, F406, 1 miniature celt made from a natural pebble, F407, 1 long tubular bead, F408, 1 triangular jasper arrow point, 1 flint bunt, F410, 1 pot rim fragment, F411, 1 long triangular flint point, F412, 2 rude bone beads, F413, 414, 1 section of a charred wooden pipe stem, F415.

Pit 79 at 60' on the west side of trench 11 was 3' 8" by 3' in top dimensions and 32" deep. It contained a large quantity of ashes, gray and white. 14" from the top were found 1 antler point with hollowed socket, F424 [pl. 35, fig. 8], 1 double pitted stone, 1 bone awl, F425, 1 worked beaver tooth, F426 and 1 worked deer phalanx.

Pit 80 at 11' in trench 14 on the east side was 4' in diameter and 60" deep. It was in two layers divided by a thin layer of top soil thrown in anciently. The uppermost layer was 48" thick and the bottom one 12". The former contained the bones of a number of animals among which the following were identified: deer, elk, moose, bear, wildcat, skunk, beaver, turtle, sturgeon. In the ashes at the top of the pit were found three perfect celts and a butt and an edge of two others. All were 17" below the surface. The presence of these celts in this feast pit suggested the idea that here had been a council, a feast and a "burying of the hatchet ceremony." Other objects from the pit were potsherds, flint chips, charred corn and charred cobs, three sections of a broken bone needle, F416, 417, 418 several pot rim fragments and a terra cotta pipe bowl. The numbers of the celts are F450, 451, 452.

The ground at the beginning of this trench and nearly up to the pit contained post holes and seemed to have once been a "lodge floor."

Pit 81 at 13' on the west side of trench 14 was 3' by 4' in top dimensions and 36" deep. It contained a large quantity of ashes and charcoal. Near the top were a few deer bones, a polished bone bead, F420 and a charred corn cob, F419.

There were no pits beyond pits 80 and 81 but indications of lodge sites in two places. Pit 78 in trench 11 intruded the trench line at 50 feet on the west side but beyond it on the west there was a barren belt that cut the trench diagonally and intercepted the trench line on the east side at about 40'.

## Plate 5



Diagram showing the position of the graves examined





Pit 82 in trench II at 110' on the west side was 3' 3" by 3' 6" in top dimensions and 60" deep. It contained few animal bones but a quantity of pot fragments. The noteworthy objects are 2 tubular bone beads, F434, 435 and a fragment of a black clay pipe bowl in the form of a bear's head, F423 [fig. 24a].

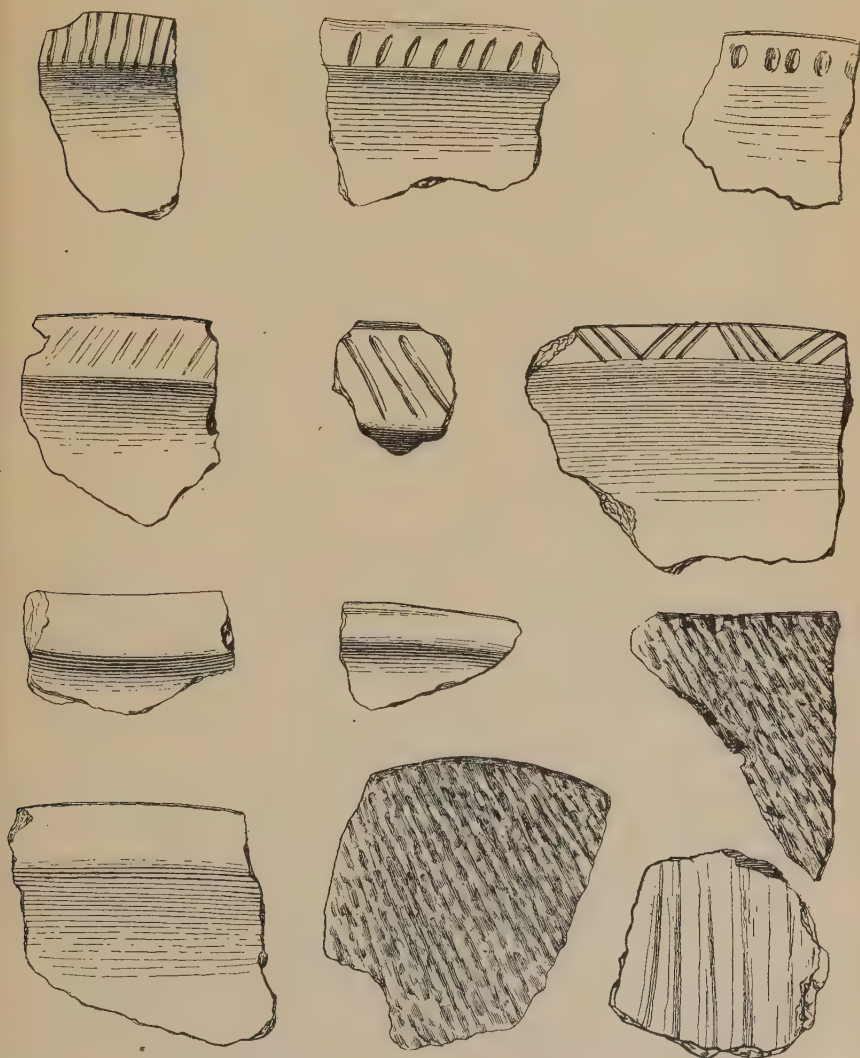


Fig. 4 Pot rim fragments from ash pit 84

Pit 83 at 110' east central in trench II was just east of pit 82. It was 4' 2" by 3' 3" in top dimensions and 35" deep. It contained a quantity of broken deer bones which had become intermixed with

the pit filling of ash charcoal and discolored sand. A triangular fint arrow head, F195, and a bone bead were found in this pit.

Pit 83a at 115' on the west side of trench 11 was just beyond pit 82. It was 5½' in top dimensions and 35" deep. The specimens found are 2 deer jaws, inferior maxillae, 1 celt edge, F448, 1 hammer stone, F440, 1 grooved stone, F512, 1 drill, 1 broken pot, 1 pipe stem and 1 pitching tool.

Pit 84 at 115' on the east central side of trench 11 was 2' 8" by 4' in top dimensions and 42" deep. It was an ash and refuse pit of the usual type and contained the following named objects: 3 bone awls, F436, 437, 438, 1 worked beaver tooth, F439, 2 *Unio* shells, 2 bone beads, 1 shell bead, 1 small crushed pot, 1 pipe bowl fragment and 1 arrow point. There were a quantity of deer bones in this pit and the rims and fragments of at least 10 different pots [see text fig. 4].

A trench parallel to trench 14 was run on the east side but 70' of excavation failed to reveal any trace of pits. The occupied soil was light and in places there was hardly a trace of it.

Pit 148 was in the broad trench 7 on the east slope. It was probably a refuse pit, few ashes or charcoal being found within it. One specimen, a small bone pestlelike object, was found.

Pit 149 at 10' in trench 7 was a refuse deposit of animal bones.

Pit 150 at 15' in trench 7 was an ash pit. In the deposit of refuse were found, 1 bone awl, 1 celt butt, 2 arrow points.

### *Record of the graves*

Grave I, pit 4, was discovered at the commencement of trench 3. When the top soil had been removed an area of disturbed earth 48" by 56" was found. The undisturbed sand surrounding the grave top was a rather compact gritty sand intermixed with small pebbles. Several small particles of charcoal in the disturbed earth evidenced a disturbance by human hands. At 38" from the top a crumbling skull was uncovered by the trowel. The superincumbent earth was removed and the remains of the skeleton exposed and photographed. The skeleton was in an advanced state of decay and it was impossible to determine the sex or measure any of the bones. A perfect pottery vessel, undecorated and of the old square-topped Iroquois form was found 15" northeast of the face. It was upright and filled solid with sand [see text fig. 5, also pl. 27]. Orientation of the skeleton: head south, face east, right side, flexed position (apparently).

## Plate 6



Pit 4, trench 3. Looking directly down into the grave. The bones had almost entirely crumbled, a part of the skull and a portion of the femur only remaining. With the skeleton was a pottery vessel





The details of grave I are shown in plate 6.

Grave II, pit 5, trench 3 at 6' on the west side. This grave was 56" deep. The bottom contained hardly a trace of the black clay-like soil usually found in grave bottoms. The bones had entirely



Fig. 5 Square-topped pot from grave I

crumbled and only streaks of white powder remained by which a seemingly flexed position might be traced.

Grave III, pit 6, in trench 3 at 8' on the east side contained the crumbling remains of a skeleton 42" below the surface. Orientation: head north, face west, right side, flexed position.

Grave IV, pit 7, in trench 3 at 12' on the west side contained the skeleton of an adult female, 42" below the surface of the ground. The top dimensions of the grave were 36" by 70". The bones were crushed and broken by the weight of the earth. The vertebrae were nearly complete. Orientation: head south, face east, right side, flexed position.

Grave V, pit 8, in trench 3 was a grave 38" deep and 36" by 72" in dimensions. The bones were in a poor state of preservation. The grave soil was black and discolored. Orientation: head north, face west, right side, flexed position.

Grave VI, pit 9, in trench 3 at 15' on the west side was 42" by 60" in top dimensions. At 26" down a broken skull was found. The earth was carefully removed and the skeleton and grave bottom brushed off. On the grave bottom just above the skull was found a massive terra cotta pipe bowl filled with charred tobacco [see text fig. 6 and pl. 31, fig. 1]. The bowl, which was decorated with deeply incised lines, had a short neck and a short nipple over which

a stem might be fitted. The skeleton was in a crumbling condition and almost useless for scientific purposes. It was evidently a male. Orientation: head southeast, face northeast, right side, flexed position with the skull bowed down upon the sternum. A photograph of the grave is shown in plate 7.

Grave VII, pit 10, in trench 3 was at 18' on the west side of the trench. It contained the crushed skull of an adult male and a number of fragments of calcined bone. The skull was upright with the lower jaw under and was in an advanced stage of dis-

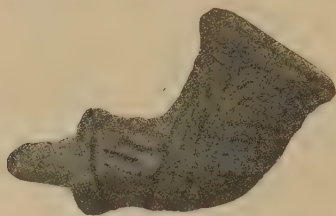


Fig. 6 Massive pipe bowl from pit 9,  
grave VI

integration. It was the only part of the osseous matter not calcined. Near the skull was found an oval flint blade [pl. 23, fig. 2], a flint chip, and a small fragment of asphalt which had evidently been used for its coloring matter.

Grave VIII, pit 11, in trench 3 was at 18' on the east upside of the trench was 36" by 50" in top dimensions and 60" deep. At 55" down the side of the skull was discovered and the grave bottom found 5" below. This grave was traced down from the topsoil by the loose sand which other than its looseness showed no trace of disturbance. No bits of charcoal, lumps of clay or topsoil were intermixed with the sand. The grave bottom was streaked with ocher and the skeleton lay in a considerable deposit of it. There was a large lump of red ocher 3 inches from the base of the skull. The bones were those of an adult male and in a fair state of preservation. The skull is noticeably large and the bones large and long. At the back of the occiput, that is to the east, with the edge 3 inches from the skull, was a large polished celt. Just above the celt, that is to the north, was a crushed pottery vessel. Below the celt an inch from the second dorsal vertebra was a streak of decayed wood, possibly cedar, and perhaps the remains of the celt handle [see pl. 38, fig. 3]. The grave soil beneath the red pigment was a dead black and was phosphatelike in its composition. This black deposit was 3/16 of an inch in thickness. A charred bean and a dozen

## Plate 7



Grave pit 9, trench 3. This grave contained the crumbling skeleton of an adult male. With the skeleton at the place indicated by the photograph was found a pipe of a most peculiar form [see pl. 31, fig. 1]





kernels of charred corn were found in the grave soil. Orientation: head north, face west, right side, flexed position. Sex, male of perhaps 30 years.

Grave IX, pit 12, in trench 3 at 35' on the west side contained the decayed skeleton of a youth of 12 or 14 years. The grave bottom 37" below the surface, rested on the clay stratum. Orientation: head south, face west, left side, flexed position.

Grave X, pit 13, in trench 3 in the middle of the trench at 35' was just east of grave IX. On the eastern end of the grave another intruding grave was found and is described hereinafter. At 42" from the surface in the clay stratum was found a badly decayed skeleton. Orientation: head south, face west, left side, flexed position.

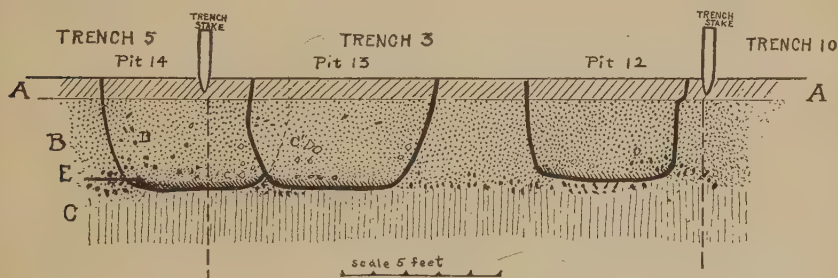


Fig. 7 Diagram of pits 12-14

Grave XI, pit 14, in trench 3 was 35' on the east and outside of the trench. This pit and pit 13 previously described intruded one another. At 42" from the surface the right femur of a young adult was uncovered by the trowel. The superincumbent earth was removed and the crumbling remains disclosed. The femur bones alone were in fit condition for removal, the others being too soft and crumbling for accurate measurement. The femora measured, right, 18.03", left, 18". A crushed pot was directly north of the skull and a deposit of purple pigment lay near the frontal bone. In this "war paint" was found a decayed bone tube. The grave bottom was lined with charred grass. Orientation: head north, face east, right side, flexed position with femora at right angles to the body.

Grave XII, pit 15, in trench 3 on the east side was just north of pit 14. At 40" below the surface the remains of an adult male skeleton were found. The skeleton was badly decayed, some of the bones were calcined and the skull was crushed by the weight of the earth. The knees were drawn tightly up against the chin and the tibiae were closed against the femora. A crushed pot was up-

right directly before the face and another at the pelvis. Orientation: head northeast, face northwest, right side, tightly flexed.

Grave XIII, pit 22, in trench 3 at 45' proved to be the grave of a child of perhaps 6 years. The bones were fragile and broken and the skull was crushed by the weight of the earth. The grave bottom was 28" below the surface. Before the face was a pottery vessel of Iroquoian form. The rim is missing from an ancient breakage and the pot body is cracked. Orientation: head south, face east, right side, flexed position.

Grave XIV, pit 23, in trench 3 was at 50' on the west side of the trench. This pit was traced down by the disturbed sand in which were lumps of topsoil, charred wood and fire-cracked stone. A badly decayed skeleton of an adult female lay at 52" below the surface in the clay stratum. To the rear of the skull was a pottery vessel having an ancient rim break. The three missing pieces were found in the grave soil and the vessel restored [*see* pl. 30, fig. 4]. An examination of the break suggested that it must have been caused by a stone or hard lump of earth when the grave was filled. Orientation: head south, face east, right side, flexed position.

Grave XV, pit 24, in trench 3 at 55' was on the east side of the trench. It contained the crumbling skeleton of an adult lying 48" below the surface. It was impossible to discover the position and there were no objects in the grave.

Grave XVI, pit 25, in trench 3 was just north of pit 24. At 42" from the surface the grave bottom was found and in it a deposit of bone dust.

Grave XVII, pit 33, in trench 3 at 65' on the east side of the trench was similar in character to grave XVI. At 48" down there was a deposit of bone dust and a crushed pottery vessel.

Grave XVIII, pit 39, at 13' on the east side of trench 5 contained the crumbling remains of a young adult male. A pottery vessel, F481 was found at the occiput an inch or two to the east. A small triangular flint arrow point was found in the lumbar vertebra and a fragment of a blue glass bead<sup>1</sup> at the pelvis. The grave was rectangular in outline being 35" by 48" and 36" deep. Orientation of the skeleton: head northwest, face southwest, right side, position flexed.

Grave XIX, pit 40 at 17' on the west side of trench 5 was rectangular in outline, being 3' by 4' and 49" deep. The skeleton was that of an adult and so badly decayed that the teeth crumbled at

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<sup>1</sup>This was the only object of glass found in any part of the site.

Plate 8



Fig. 1 Grave XX, pit 44

Fig. 2 Grave XXV, pit 51





touch. Orientation: head east, face north, right side, flexed. A large crushed clay vessel lay directly before the face.

Grave XX, pit 44, was discovered on the east side of trench 5 at 33'. The grave was irregular in outline and measured 66" by 72". The skeleton, found 49" below the surface was that of an adult male of mature years. Orientation: head south, face west, left side, flexed position. The bones were crumbling and the head was crushed flat by the weight of the soil. Above the head with the bowl near the occiput was a terra cotta pipe [text fig. 8, also pl. 31,



Fig. 8 Terra cotta pipe from grave XX, pit 44

fig. 3, 4] the stem of which reached over the skull as shown in the photograph [see pl. 8, fig. 1]. Resting upon the head was the skull of a young bear, probably the remains of a bearskin robe. The bottom of the grave was lined with a layer of charred wood and bark  $\frac{1}{2}$  inch in thickness.

Grave XXI, pit 45, was at 38' on the west side of trench 5. The removal of the topsoil disclosed a small fire pit, possibly the remains of a "grave fire." This pit was a foot in depth and contained white ashes and charcoal. Six inches below the topsoil was found a stone pipe bowl, egg-shaped, with a groove cut around it and intersecting the stem hole [see pl. 22, fig. 3]. The grave bottom was 46" below the surface. After the skeleton had been freed of the superincumbent soil and brushed it was found to be the crumbling remains of an adult female. Orientation: head south, face east, right side, flexed position. The bones had been broken by the weight of the earth and the skull was badly crushed. Half of a bone bead was found resting against the atlas and axis of the neck.

Grave XXII, pit 47, was at 44' on the east side of trench 5. When the topsoil was removed the pit outline was discovered to be rather circular, being 54" in diameter. The top of the pit was

filled with charcoal and ashes. Below the ash pit proper was a deposit of sand intermixed with bits of charcoal, calcined animal bones and lumps of intruding soil. At 48" a layer of flat stones was discovered. These were removed and 6" below, the top of a broken pot was uncovered. The surrounding earth was removed and the crumbling skeleton of a female disclosed. Orientation: head

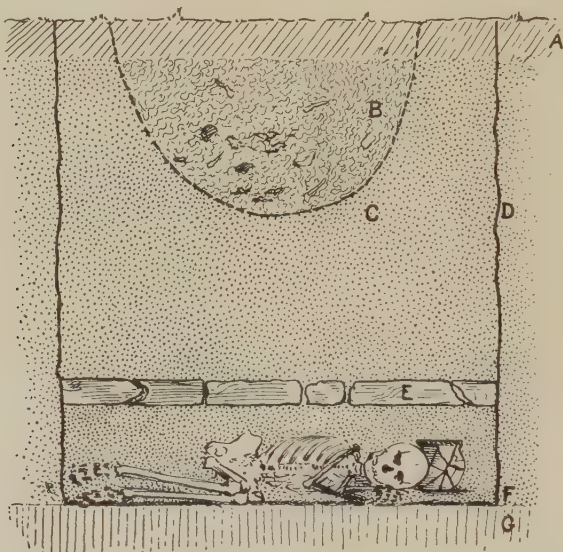


Fig. 9 Diagram of grave XXII. A=Top soil and disturbed layer; B=Fire pit; C=Disturbed sand overlying grave soil; D=Undisturbed sand; E=Overlying cover of shale slabs; F=Decayed organic matter; G=Clay

east, face south, left side, flexed position. The pottery vessel was at the occiput [see text fig. 9].

Grave XXIII, pit 48, was in trench 4 at 99' in the middle of the trench. It was 5' by 8' in dimensions and 30" deep. As the trench was one in the village section, that the pit was a grave was not suspected until a workman thrust his spade through the skull and the pottery vessel. The skeleton lay in a stratum of ashes, charcoal and sand discolored by decayed matter. Orientation: head east, face south, left side, flexed position. The broken pot which lay at the occiput was restored. The bones of the skeleton were well preserved by the ashes and seemed to yet contain a saponaceous substance, perhaps produced by the mixture of the lye from the ashes and the natural oleaginous matter in the tissue.

Grave XXIV, pit 49, was at 100' on the west side of trench 4. An ash pit had intruded into the grave pit soil. At 42" from the surface the grave bottom was discovered, upon it a thin deposit of bone dust.

Grave XXV, pit 51, was in trench 5 at 44' on the west side. Dimensions 4' by 6' and 51" deep. This pit contained the skeleton of an aged male which was in an advanced stage of disintegration. At the top of the skull and a little to the rear, southwest, was a clay pot having an ancient rim break. Near the inferior maxillary with the edge of the bowl nearest was a pottery pipe of the Huronian type [see pl. 31, fig. 2]. The position of the skeleton was, head south, face east, right side, flexed [see pl. 8, fig. 2].

Grave XXVI, pit 52, in trench 5 was at 48' on the east side and lay directly beneath a tree. The grave bottom was 48" below the surface and the skeleton had all but crumbled, probably owing to the fact that it lay in the clay stratum which had prevented drainage and thus promoted decay. Above the skull, that is to the north and east was a terra cotta vessel which broke in a dozen pieces when removed. The pottery is of poor temper and seems to have been insufficiently baked. Perhaps it had been hurriedly molded and quickly fired especially for interment with the body of the dead. The bones were long and slender and might have been judged to have been those of a woman had not an examination of the skull revealed well developed superciliary ridges over the orbits. Orientation: head east, face south, right side, flexed position.

Grave XXVII, pit 54, in trench 5 lay at 55' on the west side. 55" below the surface a deposit of bone dust was found in the clay stratum.

Grave XXVIII, pit 56, at 66' on the west side of trench 5 was an empty grave. Several pits of this character have been noted but have not been recorded here. That they are graves seems apparent because the earth is disturbed and loose while the surrounding soil was compact. Either these excavations are the remains of very old burials or are the remains of burials from which the skeletons had been removed in accord with the old Huron-Iroquois custom that prescribed a removal of bones from graves at stated periods.

Grave XXIX, pit 57, was found at the beginning of trench 8. At 29" from the surface was found a thin layer of bone dust. A crushed vessel lay back of where the skull had probably lain.

Grave XXX, pit 58, in trench 9 was at 3' on the west side of the trench. This pit was rectangular in outline, being 42" wide and



60" long. The grave bottom was 24" below the surface. The skeleton was in a poor condition and the bones were broken and decayed. The head lay to the east, the face north, right side, flexed position. In the grave were 2 pottery vessels, one to the west of the occiput and one almost under the skull, on one side with the mouth to the south.

Grave XXXI, pit 59, in trench 9 was at 9' on the west side and was a small shallow burial pit. It was 10" deep and contained besides a thin deposit of bone dust a small pottery vessel. The grave was probably that of an infant.

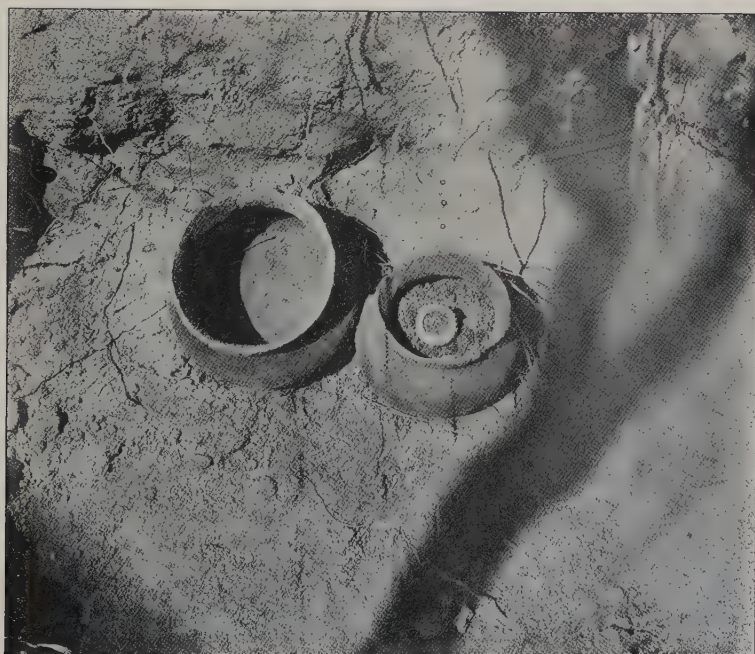
Grave XXXII, pit 60, was found 3' south of 58, the southeastern corner of 58 touching the northwestern side of 59. This grave was 10" deep and contained a plow-broken pot which may be restored. No trace of the skeleton was discovered.

It is probable that both 58 and 59 had originally been much deeper. The loose sand which forms the western hillside is easily shifted by storms of wind and rain and it is highly probable that much of the topsoil has been removed and shifted farther down the hill by these natural agencies. Those who have plowed this portion of the knoll have often ripped through pottery and bones and they may be seen even now in places white and crumbling upon the surface. It is probable that the real character of the bones was never guessed for they resemble the animal bones found on almost any cultivated ground as fertilizer.

Grave XXXIII, pit 61, in trench 9 was at 14' on the west side. 30" below the surface a disturbed skeleton was found and fragments of a broken pot. The burial seems to have been disturbed by some recent excavation.

Grave XXXIV, pit 62, in trench 10 on the west side was 33" deep. In the grave bottom resting on the clay stratum were 2 terra cotta vessels. 4" south of one of the vessels were 3 molar caps of a child of 10 or 12 years. Both of the pots were in good condition except for small rim breaks. The larger vessel was a typical Erie clay pot and the smaller one an unusual type. This latter one was half filled with some carbonized vegetable substance, very probably tobacco ashes. Buried in this ash was a clay pipe bowl of a modified trumpet form. When the pot was removed the ashes and the pipe were carefully packed as found. Above the grave was a fire pit 12" deep. It contained a handful of charred corn and beans. This pit was probably dug for the grave fire and filled by its ashes [*see* pl. 9].

Plate 9



Pit 62 at 33' in trench 10 contained the molar teeth of a child of 12 years. The excavation was probably a grave although no other osseous matter beyond the teeth was found. In the grave were two pottery vessels as shown in the photograph. One of the vessels is of an unusual form and contains a large quantity of charred tobacco ashes and the bowl of a terra cotta pipe. The pots are shown above the picture of the excavation



Grave XXXV, pit 63, in trench 9 was at 30' on the east side. It was 40" below the surface and contained the crumbling skeleton of an aged male. In the left foot between the metatarsal bones was a triangular arrowhead. The knees were drawn up within 11" of the chin and in the intervening space were 10 flint and jasper arrow points, a piece of flint, a chisel-like chunk of iron, an oval flint blade, a lump of red ocher and a smoothed pebble.



Fig. 10 Diagram showing position of articles in grave XXXV

a lump of red ocher and a smoothed pebble. The grave lay in the soft shifting sand of the hillside and most of the bones were crushed. Marks on the occiput seemed to indicate that the scalp had been cut, there being a deep circular incision in the bone. Orientation: head southeast, face northeast, right side, flexed position. Figure 10 shows the relative position of the objects as found in the grave.

Grave XXXVI, pit 64, trench 9, was at 33' on the west side. This grave was 25" deep and contained the crumbling skeleton of an adult and a broken pot of poorly tempered clay, probably hastily baked for the burial, and 5 triangular arrowheads. The skeleton lay with its skull to the east, face north, right side and flexed position.

Grave XXXVII, pit 65, was in trench 12 at the beginning on the west side and contained the skeleton of a female. The bones were in a poor condition and the skull was crushed on the upper left side. A little to the south-southwest before the orbits was a pottery vessel in perfect condition except for an ancient rim break. The soil in trench 12 was a loose gravel-mixed sand and to prevent this from sliding back into the excavation a large hole had to be dug. A careful examination of the grave top before the grave filling was removed gave the top dimensions as 48" by 58". The skeleton lay



with the head to the southwest, face northwest, right side, flexed position.

Grave XXXVIII, pit 67, was at 10' on the east side of trench 12 and measured at the top 52" by 72". The soil was a light loose sand. Ash pit 66 was found directly over the grave. It was 48" in diameter and 36" deep and filled with fire-broken pebbles, split and cracked animal bones and carbonized wood intermixed with ashes and sand. Amongst this refuse were numerous potsherds, an elk tooth, 3 bone awls, imperfect, and 1 awl large and well made. There were also several lumps of clay. The pit is probably intrusive at a period later than that of the burial [see text fig. 11].

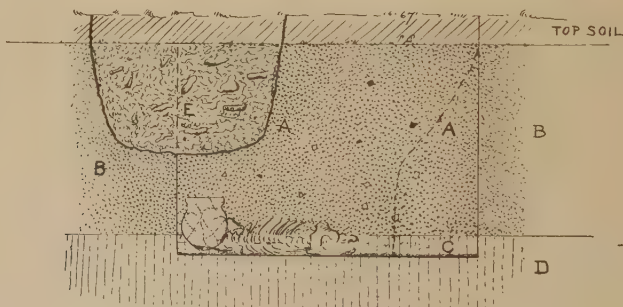


Fig. 11 Diagram of grave XXXVIII

The grave bottom was 16" below the bottom of the ash pit. The skeleton was that of a female and was in fairly good condition, but the skull had been flattened and crushed by the weight of the earth. A crushed vessel lay at the back of the head. Orientation: head south-southeast, face north-northeast, right side, flexed position [see pl. 10].

Grave XXXIX, pit 68, at 15' on the east side of trench 12 almost touched grave XXXVIII. It was somewhat smaller in dimensions, being 36" by 48" and 32" deep. It held the remains of a child of 8 or 10 years. The bones were in a fair condition but there were no fibulae or tibiae. The spine was noticeably curved and in other ways the skeleton seemed peculiar. Orientation: head east, face north, right side, flexed position.

Grave XL, pit 69, at 20' on the west side of trench 12 was 42" deep. It contained no trace of human remains. A pitcher-shaped pot was found on the east side of the excavation [see pl. 28, fig. 4].

Grave XLI, pit 86, at 55' on the east side of trench 10 was 53" deep. It contained the skeleton of an adult male the bones of which were badly crumbled. 10" before the face of the skull



Grave XXXVIII, pit 67



was a small pottery vessel with one projecting and raised point, the whole pot being decorated with the marks of a cord-wrapped paddle [pl. 28, fig. 6]. Directly north of the top of the skull was a pottery pipe of the trumpet shape [pl. 31, fig. 5] and between the pot and the pipe were a celt, a chisel of shale, a worked beaver's incisor, a flint and steel and several worked bones much decayed. The grave bottom was in the clay stratum which accounts for the poor condition of the osseous matter. Orientation: head east, face north, right side, flexed position.

Grave XLII, pit 87, at 56' in trench 10 on the west side was 34" deep. No bones besides a few molar caps of an infant of 6 or 8 were found. A large pottery vessel, F444 [pl. 29, fig. 1], with an ancient rim break and showing signs of prolonged use was found in one end of the excavation near the teeth.

Grave XLIII, pit 88, was between pits 86 and 87, at 56' in trench 10. In the grave bottom 48" below the surface was found a deposit of fine bone dust resting on the clay. Pottery vessel F443 was found in this grave [pl. 28, fig. 5].

Grave XLIV, pit 89, was at 67' in the middle of trench 10. On the grave bottom 38" below the surface lay a disintegrating adult skeleton too soft and brittle for removal. There were no objects in the grave. Orientation: head south, face west, left side, flexed position.

Grave XLV, pit 90, at 65' in trench 10 on the east side contained a crumbling adult skeleton resting in the clay stratum. The grave bottom was lined with charred bark and was 40" below the surface. Orientation: head south, face west, left side, flexed position.

Grave XLVI, pit 91, in trench 15 was 48" deep and contained the decayed skeleton of an adult. Before the face were two badly broken vessels made of poorly tempered pottery. The skeleton lay east and west with the top of the skull to the east, the face north, on its right side in a flexed position.

Grave XLVII, pit 92, at 84' on the east side of trench 10 contained the decayed skeleton of an aged adult male. It lay with the head to the east, face south, left side and in a flexed position [see pl. 11]. The skull was badly broken but of some scientific value. The spinal column was completely ossified and was removed intact. Near the lower jaw was a small double edged celt [text fig. 12], above the skull, that is to the east, was a beautiful pottery vessel, typically Erian in form, with a small raised rim point [pl. 29, fig. 2, also text fig. 13], and before the abdomen with the stem hole



nearest was a pipe of most peculiar form, the shape of some animal [pl. 22, fig. 5, *also* text fig. 14]. One of the workmen, a Seneca



Fig. 12 Celt from grave XLVII,  
pit 92



Fig. 13 Vessel from grave XLVII, pit 92

Indian, pronounced it the representation of a mythical monster known to the Iroquois as the *Niä gwă he*. The grave bottom was 39" by 63" in dimensions.

Grave XLVIII, pit 93, was at 88' on the west side of trench 10 and contained the remains of an infant skeleton. The bones were crushed and crumbling. No objects were found in the grave except a dry fibrous substance resembling the decayed fibers of some resinous wood. Orientation: head southwest, face southeast, right side, flexed.

Grave XLIX, pit 94, in trench 15 at 22' on the east side contained the broken root-eaten skeletons of two adults. Before the orbits of the southmost skeleton were 5 triangular flint arrow points and at the chin a crushed pottery vessel. Near the orbits of the northmost skeleton was a black flint knife [*see* pl. 23, fig. 8]. Orientation: skeleton 1, head east, face north, right side, almost straight position; skeleton 2, head southeast, face northeast, right side, flexed position.

Grave L, pit 95, in trench 15 was at 22' on the west side. It contained a deposit of bone dust and a crushed pot.

## Plate II



Grave pit 92, Ripley, at 84 feet in trench 10 was 3' 4" deep. It contained the decayed bones of an adult male of mature years. The spinal column was in one solid piece, the result of ankylosis. With the skeleton at the places indicated by the photograph were a double edged celt, a perfect pottery vessel, typically Erian, and a stone effigy pipe, representing some mythical animal [see pl. 22, fig. 5]



Grave LI, pit 96, at 102' on the east side of trench 10 was a large grave [see pl. 12]. The topsoil was removed and the grave area found to be 72" by 78". At 36" the rim of a pottery vessel was touched by the trowel, indicating the proximity of the grave bottom. The overlying soil was carefully removed with army trowels and the

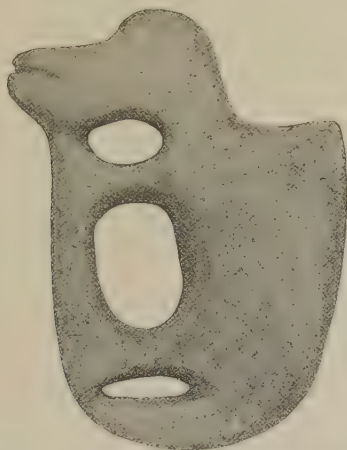


Fig. 14 Effigy pipe from grave XLVII, pit 92

skeletons cleaned and brushed. The remains of 4 skeletons lay in the grave bottom, those of an aged female, 2 children aged about 10 and 12 years, respectively, and the skull-less remains of what seemed a male skeleton. The northmost skeleton was that of a child of about 12 years. Above its crushed skull was a badly broken pottery vessel. The second skeleton was that of a female and was likewise in a poor state of preservation. Above the fore-

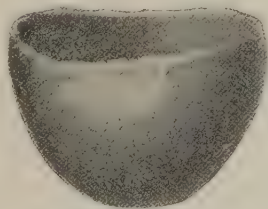


Fig. 15 Small cup from grave  
LI, pit 96

head, to the east, was a large broken pot, back of the skull was a cuplike vessel [text fig. 15] with two smaller cups turned with mouths down over it. Near the dorsal vertebra between this skele-



ton and that of the child was a copper bead within which was a section of a deerskin thong [pl. 37, fig. 3]. Upon the right lower arm were 2 copper bracelets [see pl. 37, fig. 1, 2]. The copper salts which had been released by natural agencies from the metal, penetrating the substances beneath them had preserved portions of flesh, bone, skin, deerskin, and a portion of a bark sheet [see pl. 37]. The 4 fingers and thumb of the right hand were incased in wide rolled brass rings, the salts of which had preserved the animal tissues of the hand [see pl. 32, fig. 5, 10]. Beneath this hand was a deposit of red ocher. The third skeleton was that of a child and was badly decayed. Above the remains of the skull was a large pottery vessel [see pl. 30, fig. 5]. A fourth skeleton lay at the south end of the grave. It was fragmentary and minus a skull. Near the pelvis of this skeleton and near the knee of the female were 8 triangular arrow points. Between the female and male skeletons and below the second infant was a polished bar celt. The photograph [pl. 12] gives the details of the grave. Three skeletons headed east and apparently faced the south. It was not possible to determine the position of the fourth owing to its condition.

Grave LII, pit 97, at 33' on the west side of trench 12 was 42" wide, 48" long and 42" deep. It contained the root-eaten skeleton of a female. The skull was noticeably dolichocephalic and narrow.

Grave LIII, pit 98, at 36' on the west side of trench 12 was 52" long, 48" wide and 38" deep. It contained the crumbling skeleton of an aged female. A crushed pot was found at the rear of the skull. Orientation: head south, face west, left side, flexed position.

Grave LIV, pit 99, at 33' on the east side of trench 12 was 38" deep. It contained a crumbling adult skeleton that lay with the skull to the west, face south, left side and flexed.

Grave LV, pit 100, in trench 16 on the east side at the beginning was 20" deep and contained the crumbling remains of an adult male skeleton. The skull was mesocephalic. Before the face was a celt, F477 [pl. 20, fig. 12], formed from a piece of the local shale and to the south of the skull a few inches was a pottery vessel with a wide flaring rim, F478 [pl. 30, fig. 2]. The skeleton lay with the skull to the south, face west, left side and flexed.

Grave LVI, pit 101, was central in trench 16 at the beginning. At 30" below the surface was found a root-eaten skeleton of a female. A crushed pot was found at the top of the head. The skeleton lay with the skull east, face north, right side and flexed.

Plate 12



Grave pit 96 in trench 10 contained the skeleton of an aged female, the lower right arm of which was almost entirely preserved by the copper salts formed from the heavy copper arm bands and finger rings. Two infants' skeletons were found at her side and the skeleton of a headless male, near which was found a bar celt. Ten pottery vessels were buried in this family grave. See descriptive matter in text



Grave LVII, pit 102, in trench 16 at 15' on the west side lay on the trench line. The skeleton found 24" below the surface was badly root-eaten and crumbled. The superciliary ridges over the orbits of the crushed skull indicated that the remains were those of a male. At the top of the skull were two typical Ripley-Erie pots. Orientation: head north, face east, left side, flexed.

Grave LVIII, pit 103, was a burial at 20' in the middle of trench 16. At 22" below the surface of the ground was found a crumbling root-eaten skeleton of an adult. At the occiput was a broken pot of unusual form and decoration. The skeleton lay with the head north, face west, right side and flexed.

Grave LIX, pit 104, was over the trench line of trench 16 at 24'. There was a light deposit of bone dust but no "grave dirt."

Grave LX, pit 105, west beyond LIX was outside of trench 16 in a projecting point of sand. A disintegrating skeleton was found 24" below the surface. The bones were crumbled so that it was impossible to determine the position of them. A stone pipe of unusual form was found on the east side of the excavation. The



Fig. 16 Pot from grave LX, pit 105

pipe, F472, seems to be an attempt to represent a bear's claw [*see* pl. 22, fig. 4]. 7" west of the pipe was a pottery vessel of an unusual form, F471 [text fig. 16]. Between the pot and the pipe lay a deposit of bone dust.

Grave LXI, pit 106, at 44' on the east side of trench 15 was a grave with top dimensions of 66" by 72". At 56" below the surface the grave bottom was found in the clay stratum. At the bottom was a black deposit of animal phosphate, black and clayey. There



was no visible trace of bone dust. In the southeast corner of the excavation pot F479 was found [see text fig. 17]. It had an ancient rim break but no sherds could be found in the grave soil.



Fig. 17 Pot from grave LXI, pit 106

Grave LXII, pit 107, at 33' on the east side of trench 15 was 42" deep. The skeleton was that of an adult male of mature years and was in a fair state of preservation. Even the *Os hyoid* remained. A superior maxillae of an adult bear was found over the skull, probably the remains of a bearskin shoulder robe. At the occiput and a little to the north was a beautifully shaped pottery vessel in an absolutely perfect condition, F474 [see pl. 26, fig. 1]. Two points of broken triangular arrows were found in the vertebrae of the neck just below the atlas and may have been the cause of death. The skull lay with the top to the southwest, face southeast, right side, flexed.

Grave LXIII, pit 109, at 50' on the west side of trench 15 was 39" by 50" in dimensions and 38" in depth. It contained the root-eaten crumbling skeleton of an adult. Orientation: head east, face south, left side, flexed.

Grave LXIV, pit 110, at 35' on the east side of trench 15 was 42" long, 40" wide and 48" deep. It contained a broken crumbling skeleton. A crushed pot lay at the top of the skull to the east. Orientation: skull east, face south, left side, flexed,

Grave LXV, pit 111, at 69' on the east side of trench 15 was 42" wide, 48" long and 40" deep. It held an adult skeleton. In the grave bottom was a layer of charred wood and bark 2" thick. The skeleton lay with the skull pointing east, the face south, on its left side and in a flexed position.

Grave LXVI, pit 112, at 70' in trench 15 on the west side was 52" long, 40" wide and 72" deep. It held the skeleton of a female, the bones of which were poorly preserved. The skull lay to the east, the face north, and the skeleton lay on its right side, flexed as usual. South of the right scapula was a pottery vessel, F480. Over the grave was a small pit containing a quantity of ashes, charcoal, charred corn and a bear's tooth.

Grave LXVII, pit 113, at 55' in trench 8 on the east side was 52" long, 48" wide and 63" deep. The skeleton was in a fair state of preservation. It lay with the skull to the west, the face south, on its right side and in a flexed position. Before the face and 12" from it was a fine specimen of Erie pottery, F476, and a lump of red ocher. The pot is figured in plate 26, figure 2.

Grave LXIX, pit 114, on the west side of trench 8 at 60' was 60" wide, 52" long and 54" deep. It contained the skeletons of an adult and child. Between the two skulls was a pottery vessel which rested in a deposit of red ocher. The skulls lay to the west, the faces south, each skeleton lay on the right side in a flexed position.

Grave LXX, pit 115, on the east side of trench 8 at 50' was 54" wide, 60" long and 42" deep and contained the skeletons of an adult and 2 infants. The bones were in a poor condition and were accompanied by no objects. The female skeleton seems, by the position of the skeletons, to have clasped both infants in her arms. Orientation: skulls northeast, faces southeast, left sides, flexed.

Grave LXXI, pit 116, in trench 8 at 66' on the east side was 66" long, 48" wide and 60" deep. The skeleton was that of a male and comparatively was in a fair condition but very brittle. The skull as it lay in the grave measured from the occiput to the glabella 203 millimeters. When removed the skull came apart at the sutures. Before the face were 5 triangular arrow points and there were 2 in the right hand. There was a deposit of objects near the sternum, parts of 2 bone implements, fragments of beaver teeth, flints and a few chips. A deposit of red ocher lay beneath the right cheek. Orientation: skull north, face west, right side, flexed position.

Grave LXXII, pit 117, on the east central of trench 8 was 58" deep. The skeleton was that of an aged male and was in a tightly

flexed position with the knees drawn up close to the chin. The larger bones were in a fair condition but the smaller ones including the ribs had entirely decayed. At the occiput was a clay vessel with a small rim break. An inch from the skull to the northwest was a crumbling turtle carapace with 4 perforations [see pl. 34, fig. 11]. A flint and chunk of iron lay beneath the chin as if they had been clutched in one hand and a small celt was in the angle formed by the flexed right arm. Four triangular arrowheads lay at the top of the skull, a point was found in the vertebrae below the atlas and another between the tibia and fibula of the right leg. Field measurements of the skull gave the bizigomatic length  $4 \frac{1}{16}$ " and the structural height  $7 \frac{14}{16}$ ", the distance from the glabella to the alveolar border of the superior maxillary  $3 \frac{9}{32}$ ", the nasal index was about 66.6 and the cephalic index 64.3. Orientation: head southeast, face southwest, left side, flexed.

Grave LXXIII, pit 118, on the west side of trench 15 at 82' was 60" wide, 72" long and 48" deep. It contained 2 skeletons one of which was badly decayed. The conditions seemed to indicate that the graves had been intruded and that the better preserved skeleton was more recent. The older skeleton lay with the skull toward the southwest, the face south-southeast and on the right side. The better preserved skeleton headed northeast, faced southeast and lay flexed on the left side.

Grave LXXIV, pit 119, in trench 17 on the east side at the beginning was 36" in depth. It held the crumbling remains of a skeleton and a broken pot. This first or upper grave intruded another grave, the bottom of which was 3" lower. Pot F511 was found in the lower grave. In both cases the vessels were back of the skulls. Owing to the condition of the bones it was impossible to determine the position of the skeletons.

Grave LXXV, pit 120, on the east side of trench 17 at 17' was 42" deep and contained the remains of a male. The grave soil from the top to 30" down was heavily intermixed with carbonaceous matter and ash. At 30" a layer of clay 6" thick was struck and beneath it the skeleton. At a point midway between the lower jaw and knee was found a trumpet pipe of the flat flaring rimmed type. F536 [pl. 31, fig. 6]. It was imbedded in a cementlike composition of ashes, sand and gravel. The skull lay to the west, the face south and the skeleton lay flexed on the right side.

Grave LXXVI, pit 121, on the west side of trench 17 at 20' was 42" deep and contained the crumbling remains of a male skeleton.



Fig. 1 Grave LXXXI, pit 126. Two males in single grave  
Fig. 2 Grave XCV, pit 135. Male and female in single grave





Before the sternum were 10 triangular flint arrow points, 1 perforator, 1 scraper, 2 flint flakes and 1 white spear or knife of white translucent chalcedony [see fig. 21].

Grave LXXVII, pit 122, at 25' on the east side of trench 17 was a clearly defined grave but there was no visible vestige of human remains. The grave was 48" deep.

Grave LXXVIII, pit 123, at 33' on the west side of trench 17 was 48" in depth and contained the exfoliating remains of 2 young females. At the occiput of skeleton 2 was a crushed pot. While examining the bottom of the grave another skeleton was discovered lying 6" beneath. Around the cranium of the third skeleton were arranged 4 hammer stones in the form of a semicircle. The sex of this skeleton could not be determined owing to the condition of the bones. Skeletons 1 and 2 headed east, faced south and lay flexed on the left sides.

Grave LXXIX, pit 124, at 33' on the east side of trench 17 was 3½' distant from grave pit 123. It contained the skeleton of a male. It lay with the skull to the west, the face south, on the right side flexed.

Grave LXXX, pit 125, at 44' on the west side of the trench was a small grave 24" wide, 34" long and 30" deep. A fragment of an infant's pelvis and a crumbling vertebrae were all that remained of the skeleton. Beneath the bones was a quantity of charred wood and bark.

Grave LXXXI, pit 126, at 47' in trench 17 on the east side of the trench contained the skeletons of 2 males of mature years [see pl. 13, fig. 1]. At the top of the skull of the southmost skeleton was a cord-marked vessel [see pl. 30, fig. 3], and at the occiput of the northmost was a broken vessel. Midway between the two was a round water-washed pebble stained with red ocher. At the abdomen of the northmost was a scapula and humerus and reaching beneath the right leg of the southmost was an ulna and a radius, the bones of an arm not belonging to either skeleton. In the lower leg of the southmost skeleton was an arrowhead of unusual material. The tip had been broken off but was found near the tibia. Orientation: southmost, skull northeast, face northwest, right side, flexed position; northmost, head southeast, face southwest, left side, tightly flexed.

Grave LXXXII, pit 127, at 55' in the middle trench 17 was 42" wide, 48" long and 48" deep. The crumbling skeleton was that of a male. At the top of the skull was a large pot cracked on one

side but otherwise in good shape.<sup>1</sup> When the skull was emptied two vertebrae and three phalanges fell from it. These had probably been placed in the skull by some small rodent, the remains of whose burrow were found circling the pot. An ash pit 20" deep was over this grave. The skull pointed south and faced west and the skeleton lay on its left side, flexed.

Grave LXXXIII, pit 128, in trench 17 on the east side was found directly beneath a plum tree and therefore the skeleton could not be properly exposed. Within the grave at 49" below the surface was found a female skeleton. At the occiput was a pottery vessel of the corded type. The skull pointed east, faced north, and the skeleton lay flexed upon its left side.

Grave LXXXIX, pit 129, at 67' on the east side of trench 17 was 60" by 62" and 42" deep. In this grave were 2 female skeletons. The eastmost skeleton lay upon its back with the face up and the inferior maxillary dropped upon the vertebrae. The westmost lay in the usual position. Orientation: eastmost, head southeast, face up, right side, flexed; westmost, head southeast, face northeast, right side, tightly flexed.

Grave XC, pit 130, at 67' on the west side of trench 17 was separated from pit 123 by a space of 2' 6". The grave was 60" long, 48" wide and 52" deep. Upon the bottom was a female skeleton crushed and flattened. On the middle finger of the right hand was a coiled brass ring. One of the same kind was found on the same finger of the left hand also. The right hand was held flat over the forehead and the copper salts from the ring had preserved a small patch of fine black hair and the scalp to which it was attached [see pl. 37, fig. 8], also a small piece of deerskin and a fragment of some bark fabric, both perhaps parts of the burial shroud. The skull pointed to the southeast, the face to the northeast and the skeleton lay on the right side, flexed.

Grave XCI, pit 131, at 66' on the east side of trench 17 was 40" deep and contained the skeleton of an adult female. A crushed pot containing the cracked bones of a deer was found at the occiput. Over the grave was a small shallow pocket filled with charcoal and ashes. This perhaps was a true burial or grave fire pit. The skeleton lay on the right side, flexed, with the skull east and the face north.

Grave XCII, pit 132, in trench 17 at 70' on the west side was 47" deep. In this grave was the skeleton of a female fairly well pre-

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<sup>1</sup> This pot is the largest found in the site.

Plate 14



Necklace of shell disks found about the neck of a female skeleton, grave pit 133, trench 18, at 20' on the west side. Restrung, bead for bead, as found





served. It lay upon its back with the face turned to the left but otherwise in the usual flexed position. At the top of the skull and a little to the front was a celt, F520. The skull lay to the southeast and the face southwest. Four views of the cranium are shown in plate 17.

Grave XCIII, pit 133, in trench 18 at 20' on the west side was 39" deep. Over the entire grave was a heavy layer of black carbonized substances, a foot in thickness. The fragile skeleton of a female lay in the grave bottom. Above and slightly to the rear of the skull was a crushed vessel. Before the face were flints, steel, F546, graphite, F545, red ocher and a heap of incised shell tablets, F617 [see pl. 36, fig. 1]. A necklace of discoidal shell beads, F618, encircled the neck [see pl. 14]. At the chin as if once attached to the circle of beads were 2 shell gorgets and a pendant, F516 [see pl. 36, fig. 2, 3, 7]. On the middle finger of the right hand was a coiled copper ring. The soil was an ash and clay mixed gravel and sand and cementlike. It was therefore very difficult to expose and remove the bones. The thin skull collapsed when lifted. The skeleton lay on its left side, flexed, with the skull pointing south and the face to the west.

Grave XCIV, pit 134, at 33' on the east-central side of trench 18 was 42" deep and contained the skeleton of a female. Owing to the cementlike character of the soil here and the fragility of the bones it was impossible to remove them. The skull which was crushed was taken up with great care but fell apart. A broken pot was found at the occiput. The skull headed south and the face was to the east. The skeleton lay on its right side, flexed.

Grave XCV, pit 135, at 22' on the east side of trench 18 was 66" wide, 66" long and 42" deep. Excavations revealed the skeletons of an adult male and female [see pl. 13, fig. 2]. Between the skulls was a crushed and broken pot. Near the shoulders of the female and touching the radius of the male were the following objects: 1 spatulate water-washed pebble, 4 flint chips, 4 leaf-shaped flint blades, 1 oval flint knife, 3 chunks of flint, 10 triangular arrow points and 1 scraper. The male lay with the head pointing toward the southeast and facing the southwest, on the left side and flexed; the female on its back with face up and skull to the south and legs flexed to the southwest.

Grave XCVI, pit 136, at 40' on the east side of trench 18 was 48" deep. Over the grave was a shallow ash pit in which was found a bear's tusk. The skull pointed toward the southeast, the face down and the body on the left side flexed.

Grave XCVII, pit 137, in trench 18 at 44' on the east side was 37" deep. It held the crumbling remains of a female's skeleton, headed east, facing south and on the right side flexed.

Grave XCVIII, pit 138, outside of trench 18 on the east at 44' adjoining pit 137, was 48" deep, 49" long and 60" wide. It contained the skeletons of a male and a female [see pl. 15, fig. 1]. The bones had been disturbed by some burrowing animal, probably a woodchuck. The skeletons lay back to back, the female on its left side and the male on its right. The skull of the female was twisted directly around and the lower jaw rested on the male's occiput with the chin toward its own skull. Between the two skeletons were three triangular arrow points, a leaf-shaped point and a lump of red ocher. The male lay with the skull to the south, the face east and flexed on the right side; the female originally probably lay facing the southwest with the skull pointing southeast, on the left side, flexed.

Grave XCIX, pit 139, at 66' in trench 18 on the east side contained the crumbling remains of an adult. At the face were 9 triangular arrowheads and one oval flint knife. At the top of the skull was a broken pottery vessel and at the abdomen a deposit of red ocher. A broken triangular point was found in the decayed femur. At the foot of the grave, that is to the west, was the skull of a bear, a copper bead and a triangular flint. The skeleton lay with the head east, the face south, on the left side flexed apparently.

Grave C, pit 140, at 66' in trench 18 on the west side was 42" deep, 40" wide and 50" long. It held the crumbling remains of a male headed east, facing south on the left side. At the top of the skull and about 5" from it was a pottery vessel, F515. At the occiput was a polished stone pipe and near the bowl 2 arrow points [see pl. 15, fig. 2].

Grave CI, pit 141, at 77' on the east side of trench 18 was 36" deep. In this grave was found the crumbling skeleton of a male. At the forehead was a broken pot and a black stone pipe rested on the ulna of the right arm. The pipe is figured in plate 22, figure 7. The skeleton lay on its right side heading east and facing south, on the right side, flexed.

Grave CII, pit 142, at 85' on the west side of trench 18 was 32" deep. It contained the crumbling remains of a child at the top of whose skull was a broken pot. The skull was toward the east, the face south and the skeleton lay on the left side flexed.

Plate 15



Fig. 1 Grave XCVIII, pit 138

Fig. 2 Grave C, pit 140





Grave CIII, pit 143, was at 5' in the middle of trench 19 and was 32" deep. It contained the crumbling remains of an adult female and an infant. The adult headed east, faced north and lay on the right side; the infant headed east, faced north and lay on the right side. At the occiput of the female was a deposit of red ocher.

Grave CIV, pit 144, at 22' on the east side of trench 19 contained the skeleton of a male. Two arrowheads were found at the top of the skull. Orientation: skull east, face north, right side, flexed.

Grave CV, pit 145, at 100' in the middle of trench 10, was 48" deep. At one end of the excavation was a rimless vessel. The bones had disappeared.

Grave CVI, pit 146, on the east side of trench 19 at 66' was 42" in depth. The grave held the crumbling remains of an adult female headed northwest and facing southwest. Before the face was a crumbling pottery vessel.

Grave CVII, pit 147, on the west side of trench 19 at 70' contained the crumbling skeletons of a female and an infant. At the occiput of the adult was a broken pot having an ear or handle.

Summary of the record of the graves

Burial	Pit	Depth in inches	ORIENTATION			cPosi- tion	Sex	Condi- tion	Objects	Position
			Face	Skull	Side					
I.....	4	42	E	S	R	F	.....	D	1 pot.....	15" before face
II.....	5	56	.....	.....	.....	.....	.....	E	.....	.....
III.....	6	42	W	N	R	.....	.....	D	.....	.....
IV.....	7	42	E	S	R	.....	F	.....	.....	.....
V.....	8	38	W	N	R	.....	.....	.....	.....	.....
VI.....	9	30	NE	SE	R	.....	M	.....	1 pottery pipe.....	Above skull
VII.....	10	48	.....	.....	.....	Bdl	.....	Cal.	1 oval blade.....	Near skull
VIII.....	11	60	W	N	R	F	M	.....	Pot, celt, paint.....	At occiput
IX.....	12	37	.....	.....	.....	.....	Juv	.....	.....	.....
X.....	13	42	W	S	L	.....	.....	.....	Pot, bone, tube.....	Top of skull
XI.....	14	42	E	N	L	.....	M	.....	2 pots.....	1 before face and 1 at pelvis
XII.....	15	40	NW	NE	R	.....	.....	Cal.	.....	.....
XIII.....	22	28	E	S	R	.....	Juv	.....	Pot.....	Before face
XIV.....	23	52	E	S	R	.....	.....	.....	Pot.....	At occiput
XV.....	24	48	.....	.....	.....	.....	.....	.....	.....	.....
XVI.....	25	42	.....	.....	.....	.....	.....	.....	.....	.....
XVII.....	33	48	.....	.....	.....	.....	.....	E	Pot.....	In bone dust
XVIII.....	39	36	SW	NW	R	.....	.....	.....	Pot, arrow, glass bead fragment	Pot at occiput, arrow in spine
XIX.....	40	49	N	E	R	.....	.....	.....	Pot.....	Before face
XX.....	44	49	W	S	L	.....	M	.....	Pipe.....	At top of skull
XXI.....	45	46	E	S	R	.....	M	.....	.....	.....
aXXII.....	47	60	S	E	L	.....	M	.....	Pot.....	At occiput
aXXIII.....	48	30	S	E	L	.....	F	.....	Pot.....	At occiput
XXIV.....	49	42	.....	.....	.....	.....	.....	.....	.....	.....
XXV.....	51	51	E	S	R	F	M	E	Pot, pipe.....	Top of skull below jaw
XXVI.....	52	48	.....	.....	.....	.....	.....	D	Pot.....	At top of skull
XXVII.....	54	55	.....	.....	.....	.....	.....	E	.....	.....
XXVIII.....	56	60	.....	.....	.....	.....	.....	E	.....	.....
XXIX.....	57	29	.....	.....	.....	.....	.....	E	Pot.....	At occiput (?)

XXX.....	58	24	N	E	R	D	2 pots.	At occiput
XXXI.....	59	10				E	Pot.....	Indeterminate
XXXII.....	60	10'					Pot.....	Indeterminate
XXXIII.....	61	30					Pot fragments.....	Indeterminate
XXXIV.....	62	33	NE	SE	R	Juv	2 pots, 1 pipe.	Indeterminate
XXXV.....	63	40	N			M	Flints etc.....	Before face
XXXVI.....	64	25	NW	NE	R	M	Pot, arrows.....	Indeterminate
XXXVII.....	65	48	NNE	SSE	R	Juv	Pot.....	Before face
XXXVIII.....	67	52	N	E	R		Pot.....	At occiput
XXXIX.....	68	32	N					
XL.....	69	42		E	R	M	Pot.....	Indeterminate
XLI.....	86	53	N				Bone implements, pot, pipe, flints, celt	Pot before face, pipe over head (see rec- ords)
XLII.....	87	34				Juv	Pot.....	Indeterminate
XLIII.....	88	48					Pot.....	Indeterminate
XLIV.....	89	38	W	S	L			
XLV.....	90	40	W	S	L			
XLVI.....	91	48	N	E	R		2 pots.....	Before face
XLVII.....	92	40	S	E	L	M	Pot, celt, pipe.....	Pot above skull, pipe at abdomen, celt at jaw
XLVIII.....	93	30	SE	SW	R	Inf	Decayed wood.....	
XLIX (a).....	94	51	N	E	R		Flints.....	Before eyes
(b).....	94		NE	SE	R		Pot.....	Indeterminate
L.....	95							Near skulls
LI (a).....	96	42	S	E	L	F	9 pots etc.....	(see records)
(b).....	96	42	S	E	L	Inf	(see records)	
(c).....	96	42	S	E	L	Inf	Bar celt.....	At abdomen
(d).....	96	42			R	M		
LII.....	97	42				F	Pot.....	At occiput
LIII.....	98	38	W	S	L	F		
LIV.....	99	38	S	W	R		Pot, celt.....	Top of skull, face
LV.....	100	20	W	S	L	M	Pot.....	Top of skull
LVI.....	101	30	N	E	R	F	2 pots.....	Top of skull
LVII.....	102	24	E	N	L	M		

c F=Flexed. Unless otherwise stated, the position is flexed.

b C=fair, D=poor, E=entirely disintegrated, Cal=calined.

a Ash pit burials.



Summary of the record of the graves (concluded)

Burial	Pit	Depth in inches	ORIENTATION			cPosi- tion	Sex	bCondi- tion	Objects	Position
			Face	Skull	Side					
LVIII	103	22	W	N	R			D	Pot.	At occiput
LIX	104	24						E	Pipe, pot.	Indeterminate
LX	105	24						E	Pot.	Indeterminate
LXI	106	56						E	Pot, flints, bear's skull	At occiput
LXII	107	42	SE	SW	R		M	C		
LXIII	109	38	S	E	L			D	Pot.	Top of skull
LXIV	110	38	S	E	L			D		
LXV	111	40	S	E	L			C		
LXVI	112	72	N	E	R		F	D	Pot.	At occiput
LXVII	113	63	S	W	R			C	Pot, ocher	Before face
LXIX (a)	114	54	N	E	R		Ad(F?)	D		
LXIX (b)	114	54	N	E	R		Inf	D	{ Pot	Between skulls
LXX (a)	115	42	SE	NE	L		F	D		
LXX (b)	115	42	SE	NE	L		Inf	D		
LXX (c)	115	42	SE	NE	L		"	D		
LXXI	115	60	W	N	L		M	D		
LXXII	117	58	SW	SE	L		M	C	Pot, flints, steel etc.	Occiput etc. (see rec- ords)
LXXIII (a)	118	48	SE	SW	R					
LXXIII (b)	118	48	NE	SE	R			D	Pot.	At occiput
LXXIV (a)	119	36	S	W	R			D-E	Pot.	At occiput
LXXIV (b)	119	39						D	Pipe	Near sternum
LXXV	120	42	S	W	R		M	D	Flints.	Near sternum
LXXVI	121	42						D		
LXXVII	122	48	S	E	L		F	D		
LXXVIII (a)	123	48	S	E	L		F	D		
LXXVIII (b)	123	48						D	Pot.	Occiput
LXXVIII (c)	123	54					Ad	D	4 round pebbles.	Around skull
LXXIX	124	42	S	W	R		M	D		
LXXX	125	30						E	Charred bark.	

LXXXI (a)	126	48	SW	SE	L	M	Pot.	At occiput
LXXXI (b)	126	48	NW	NE	R	M	Pot.	At top of head
LXXXII	127	48	W	S	R	M	Pot.	At top of skull
LXXXIII	128	49	N	E	L	F	Pot.	At occiput
LXXXIX (a)	129	42	up	SE	R	F		
LXXXIX (b)	129	42	NE	SE	R			
XC	130	52	NE	SE	R	F	Copper rings	On fingers
XC.	131	40	N	E	R	F	Pot.	At occiput
XCII	132	47	SW	SE	back	F	Celt	Top of skull
XCIII	133	39	W	S	L	F	Pot, flints, shell beads, etc.	Occiput, face, neck etc. (see records)
XCIV	134	42	E	S	R	F	Pot, flints	Between skulls
XCV (a)	135	42	SW	SE	L	M		at female's scapula
XCV (b)	135		up	S	back	F	C	
XCVII	136	48	down	SE	L	F	D-E	
XCVII	137	37	S	E	R	F		
XCVIII (a)	138	48	NE	SE	R	M		
XCVIII (b)	138	48	NE	SE	R	F	Flints	Between skeletons
XCIX	139	42	S	E	L	F	Pot, flints, other, copper bead	Top of skull, face, abdomen, feet
C.	140	42	S	E	L	M	Pot.	At top of skull
CI.	141	36	S	E	R	M	Pot, pipe	At face, on arm
CII	142	32	S	E	L	inf	D-E	Top of skull
CIII	143	32	N	E	R	inf	Red other	At occiput
CIV	144	40	N	E	R	inf	D-E	
CV	145	48	N	E	R	M	Flints	Top of skull
CVI	146	42	SW	NW	R	F	Pot.	Indeterminate
CVII	147	45				F	Pot.	Before face
CVII (a)	147	45				F	Pot.	At occiput
CVII (b)	147	45				inf	D-E	

a Ash pit burials.

b C=fair, D=poor, E=entirely disintegrated, Cal.=calcined.

crF=Flexed. Unless otherwise stated the position is flexed.

### Significance of some of the data

From the data secured in the course of the operations one might construct a fairly correct account of the life and activities of the people who left so many significant traces. One might picture the scenes of primitive agriculture, the excitement and dangers of the chase, the industries of the pot maker or the flint worker or the home life of the warrior father, his wife and children, but this picture is left for the reader to produce. Our work is rather to tell how the facts were gathered, and, for the guidance of those who wish to revivify the scenes of the past, to suggest how this may be done. Hasty conclusions and preconceived ideas are to be studiously avoided and no theory should be considered more than tentative unless the proof is so strong as to eliminate doubt.

### *Indications of an earthwork*

Excavations were not carried on long before enough evidence was secured to point out the former presence of a circular earth ring in the village section. This ring seems to have inclosed the main portion of the village and to have separated it from a group of pits and lodge sites to the south. Just beyond pits 26, 27, 78 and 79 the soil became very hard and compact and the occupied soil covered with a layer of sand and gravel. The earth in the center of this belt was hard and compact. It was evidently disturbed and intermixed but exhibited few signs of modification by the substances incident to human occupation such as ashes and charcoal. A few inches of the disturbed subsoil overlay the occupied soil on either side of the barren belt [see text fig. 18]. From these facts it was inferred that at some time an earth ring or wall had been leveled down and the earth of which it was composed thrown

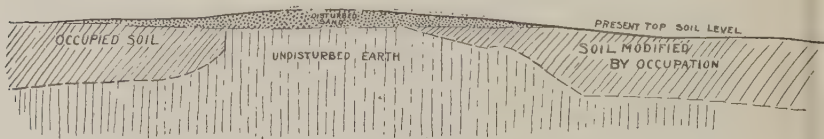


Fig. 18 Cross-section of soil beneath obliterated earth ring

over the occupied soil. The outline of the belt was traced and found to be circular in form or rather crescentic, the ends of the belt touching the lake bank. The original form had undoubtedly been circular, the encroaching lake having undermined the cliffs

which, falling, had carried away a part of the village site and with it the missing portion of the ring [*see* map of village site, pl. 4].

The soil most modified by the occupation, that is to say, the topsoil most deeply stained and intermixed with waste products of aboriginal activities, was that part embraced within the area of the dirt ring. Just outside of this ring there was another occupied layer but it did not extend far. Some time after the discovery of the former presence of the earth wall, on September 4, Mr George Morse, an old settler, visited the scene of the operations and introduced himself as one of the pioneers of Chautauqua county, and as a man who in his boyhood remembered the site and its features. Mr Morse made a verbal statement to the Archeologist which was taken down verbatim. The account was afterward read to him and pronounced correct. The statement follows:

STATEMENT OF GEORGE MORSE RELATING TO THE EARTH RING

Taken verbatim

I was born in 1823 a half mile from Dewey knoll and as a child remember the Indian fort ring here. It was breast high and as round as a cart wheel. My father said it (the inclosure) was covered with a second growth whitewood woods. All around the circle several rods from its edge was the primeval forest which was cleared away by Mr Dewey,—he owned the land once. To be precise I remember that the ring was not complete for the two ends like the letter C touched the lake bank.

Since the earliest days relics have been carted away. When the stumps were pulled and whenever the grub hole struck, arrows and "skinning stones" would come to light. Sometimes Indian crockery (pottery) in pieces as big as your hand and bigger would be found.

I remember it was as round as a cart wheel and was plowed down to level it off. My father planted corn there in 1826 and he plowed and dug it level. There was a stone mound covered with earth there. My brothers dug into it but did not dig deep enough I think. Finally the bank caved off,—caves off every spring a good deal, and a part of the mound fell into the water. Then when we looked at it we saw a skeleton exposed under it. Shortly the entire mound went over into the lake.

The earth ring is found in many places in western New York and elsewhere and is the base upon which a line of sharpened stakes or palisades was placed to fortify the enclosure. This being true, the village here must have been within the circular walls of sharpened posts that rose from the earth circle. A number of families probably had lodges outside the fortification. These may have been the less cautious or those who were crowded out through lack of space within the narrow confines of the picket wall.



*Post holes and lodge sites*

A large number of post holes, that is small holes from 18" to 24" deep, filled with substances somewhat different from the surrounding soil, were discovered in the village layers [see diagram of pits, pl. 4]. The positions of these holes were carefully charted and were found to bear a certain relation one to the other. The character of the soil inclosed by lines bounding these holes was carefully noted and seemed to indicate the dirt floors of lodges. The post holes therefore, were probably the holes made by the stakes that formed the uprights of dwellings. Although a number of lodge sites, so called, were discovered it is not to be thought that there were not other lodges elsewhere.

*Mortuary customs indicated*

The areas of most of the graves were large in proportion to the space occupied by the skeletons. In general the bones rested in the center or at one corner of the excavation, leaving a wide space about the bones. Nearly all the skeletons were arranged in a flexed position. From these circumstances it might be inferred that the dead were carefully placed in the graves and arranged by persons who descended into them. This assumption appears strengthened when it is considered that the pottery vessels which probably contained food could not have been easily dropped into the grave and have remained upright as they were in almost every instance. The whole make-up of the graves and the positions of the articles found in them indicate the hand of design. The decayed substances found over the grave bottoms seem to indicate that other perishable possessions were placed in the graves, such as articles of wood, bark, skins and fabrics of bark or reeds. It is not to be supposed that objects were not placed in some graves because none were found. The lack of stone or pottery articles suggests that only perishable substances and utensils have been interred. In the bottoms of many of the grave pits just beneath or mingled with the animal phosphate were layers of charred vegetable matter, either bark, grass or reeds. From this fact it would appear that in such pits fires had been kindled, either to dry the damp earth or to warm the bed for the sleeper whose body must rest so long within it. This is in accord with certain traditions. Thin and sometimes almost imperceptible layers of decayed vegetable matter over some of the skeletons strongly suggests the use of bark or wood as a covering for the bodies before the earth was finally thrown back into the excavation. In a few cases flat pieces

of charred bark were found above the bones. The use of a bark or animal skin covering is also suggested by the finds in grave LI, pit 96, where above the copper bracelets a fragment of bark and a piece of deerskin were found preserved by the copper salts. When it is considered, moreover, that a primitive people would naturally reverence the dead it seems highly probable that they would shrink from casting clods of clay or masses of mud upon the form of those whom they had evidently arranged and dressed with every manifestation of solicitude. Moreover, to have covered the corpse with a shroud of skin or a covering of bark would have added an element of mystery to the interment. The body would have been obscured during the process of burial. To cast stray stones and earth upon the form beneath would have shocked the primitive people to whom care for the dead was probably an important religious rite. If the vessels of clay contained food for the skyward journey it would hardly seem that this food would have been tainted by earthly flavors, but rather covered for cleanliness. This supposition seems to be given weight by the fact that two pots were found in the clay stratum over the mouths of which were wads of clay, the vessels being empty. From the fact that weapons and utensils were buried one is led to think that the people believed or affected to believe that these things, or perhaps the spirits of these things, would be of value to the spirit of the dead. All the clay pipes from the burials contained charred tobacco and from this fact it might be conjectured that the pipe of the sacred herb had been lighted in the grave for a consolation to the spirit as it started out in the new and strange world of spirits.

The positions of the various objects, especially of the pottery vessels are highly interesting. Most of them were near the head as were some of the pipes. The table appended herewith gives a summary of the positions of the pots in relation to the skeletons.

#### Position of the pots

Before face, 11; at occiput, 25; top of skull, 16; near abdomen, 1; at pelvis, 1; between skulls, 2; indeterminate, 14.

**Graves in ash pits.** Two graves were found in true ash pits. These pits were situated just beyond and outside the earth ring and were side by side [*see* record of pits 48 and 49]. Both pits were shallow,  $2\frac{1}{2}'$ , and the skeletons had only light covers of charcoal and ashes to separate them from the ordinary pit refuse. It may be possible that the ash pits were within or near a lodge site and

were used as graves when the ground elsewhere was frozen. Broken pots were found in both of these graves.

**Primitive means of excavating.** Trowellike implements of antler were found in several ash pits and were probably the tools used for digging pits and graves. The sand might have been easily loosened with picks of antler or wood or with the shoulder blades of elk or deer and have been scooped up with shallow bark baskets.

The grave fillings in at least 40 cases were heavily intermixed with carbonized wood and bark. This suggests that the topsoil had been thawed out to facilitate digging in winter.

**Depth of graves.** In most cases the graves were dug as deep as it would be possible with rude implements. This depth was to the clay stratum or into it for a few inches. Because of the poor drainage of the clay the skeletons buried within it decayed much more rapidly than those in the loose sand. A table of depths follows:

Table of depths of graves

Inches	No. of graves	Inches	No. of graves	Inches	No. of graves
10.....	2	36.....	3	51.....	2
20.....	1	37.....	2	52.....	3
22.....	1	38.....	6	53.....	1
24.....	4	39.....	2	54.....	2
25.....	1	40.....	7	55.....	1
28.....	1	42.....	21	56.....	2
29.....	1	45.....	1	58.....	1
30.....	6	46.....	1	60.....	4
32.....	3	47.....	1	63.....	1
33.....	1	48.....	15	72.....	1
34.....	1	49.....	3		

**Arrangement of graves and position of skeletons.** An examination of the map of the burials shows that apparently no fixed system of plotting the graves was observed. The graves seem to have been dug where the sand was softest and most easily excavated. It will be noticed, however, that the graves cluster about open spaces. From this it might be inferred that they were arranged about a large tree that afterward decayed.

An examination of the table of orientation reveals that the bodies were not apparently arranged to face any particular cardinal point. This, however, does not necessarily indicate the lack of system. It may be that the position in which a person died governed the position in the burial.

*Orientation by direction of head*<sup>1</sup>

## HEAD NORTH

Face west on the right side

6F, 8, 11M, 116M..... 4

Face east on left side

14M, 102M ..... 2

Total ..... 6

## HEAD EAST

Face north on right side

40, 68juv, 86M, 91, 94, 101F, 112F, 114:1, 114:2, 128,  
131F, 137M, 143:1, 143:2inf, 144M..... 15

Face south on left side

47M, 48F, 52, 92M, 96:1F, 96:2juv, 96:3juv, 109, 110,  
111, 123F, 123:2F, 139, 140M, 141M, 142inf..... 16

Total ..... 31

## HEAD SOUTH

Face east on right side

4, 7F, 22juv, 45F, 51M, 134F..... 6

Face west on left side

13, 44M, 89, 90, 98, 100M, 127M..... 7

Face up on back

135:2 ..... 1

Total ..... 14

## HEAD WEST

Face south on right side

99, 113, 120, 124M..... 4 4

## HEAD NORTHEAST

Face northwest on right side

15M, 65, 126:2M..... 3

<sup>1</sup>The numbers refer to the burials and the letter following to the sex, thus, M, male; F, female; inf, infant, and juv, juvenile. Where there is no letter the skeleton is probably that of an adult, the sex being indeterminate on account of the condition of the bones.



## Face southeast on left side

115: F, 115:2inf, 115:3inf.....	3	
Total .....		6

## HEAD NORTHWEST

## Face southwest on right side

39 .....	1	1
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## HEAD SOUTHWEST

## Face southeast on right side

93inf, 107M, 118:1.....	3	3
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## HEAD SOUTHEAST

## Face northeast on right side

9M, 63M, 67, 94:2, 118:2, 129:1 (face up)F, 129:2F, 130F, 138M, 138:2F.....	10	
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## Face southwest on left side

117M, 135:1M, 136 (face down), 132.....	4	
Total .....		14
Not determined .....	34	34
Total .....		113

*Morphological characters*

Field measurements of the bones indicate that the people were of medium height, 5 feet 7 or 8 inches being the average. A few skeletons were found that approached 6 feet. That the race was stocky is shown by the heavy development of muscular ridges, especially in the case of males whose bones were generally large.

The loose sand affording good drainage preserved the bones when they were not buried directly upon the clay stratum but in either case by the shifting of the sand or through some other agency, most of the skulls were broken or crushed while other bones were in a much better state of preservation. Some of the complete skulls are of unusual interest. In form nearly all are either dolichocephalic

Plate 16



Top and side views of skull from grave XCVIII



Plate 17



Four views of an adult female cranium from grave XCII. Note, Y-shaped lesion in frontalis, see front view; dolichocephaly shown in top view; wormian bones and sutural formation in back view; small alaphenoid and facial angle in side view





or subdolichocephalic, none being of the brachycephalic type common to the mound-builder region 100 miles to the west. A considerable proportion of the skulls in Erie sites 40 miles east is characterized by alveolar prognathism, but among those found at Ripley only two showed this development. The *os incae* was observed in a few instances and there were some skulls having wormian bones[see pl. 17]. In one skull the *os japonicum*, that is, the lower portion of the malar bone when divided by a suture, was observed.

The average capacity of the skulls is 1587 cubic centimeters for males and 1440 for females. The average cephalic index would be perhaps 74.4 and the nasal index 47. A careful study of all the morphological characteristics will be made in the laboratory and reported in another place and may slightly modify the averages here given.

In a few cases humeri were observed in which the olecranon cavity was perforated. In two cases an examination of the femora revealed the process termed the third trochanter and the hypotrochanteric fossa. Some femora are platynecmic.

#### *Pathological conditions*

With the exception of two cases of ankylosis, no pathological conditions were noted. There are a number of bones, however, that show the repair of breaks.

Only in a few cases were possible clues to the cause of death discovered. In several skeletons triangular arrow points were found between the vertebrae or in some other part of the osseous structure. A remarkable form of ankylosis was observed in the case of an aged male whose entire spine had become cemented into one solid bone. Such conditions are probably rare in Indian skeletons. One low type female skull marked by prognathism and wormian bones had the frontal bone crushed and the perforation filled and repaired by osseous matter. If it is permitted to judge character from the form of the skull one would be strongly tempted to say that the deceased must have been no congenial companion, to say the least [see pl. 17].

#### **Identity of the inhabitants**

##### *Eries*

The general type of the artifacts discovered in the course of the excavations, especially the types of the pottery, closely resemble Iroquoian forms. In particular they resemble the Erian. The fact that pieces of iron and copper were found in graves and ash pits

proves that the former inhabitants of the site had contact, direct or indirect, with Europeans. That few objects of European metal were found and no glass beads save a fragment of one indicates that the people acquired them from a single trader or by trade from other Indians. This latter conclusion in the light of evidence seems the more probable. If the inhabitants of the site had contact, direct or indirect, with the whites, then we may look for historical records by which we may identify them. In the Jesuit Relations are found many references to a people who inhabited the region of which the Ripley site forms a part. These people are variously called Eries, Eriegoneckkak, Eriehronnons, Eriéé, Riquehronnons, Rhiier, Nation des Chat, Cat Nation, Rhierrhonons, etc. etc. Besides the accounts by the Jesuits there are several maps which place the Erie Indians in this territory, notably the maps of Sanson of 1656 [see



Fig. 19 A portion of Sanson's map of 1656 showing a part of the territory held by the Eries up to 1654. The Ripley site lies in this territory. Eriehronons is one of the names for the Eries frequently used by the early French explorers and missionaries.

fig. 19], of Creuxius of 1660, of LaHontan of 1690, and of Hennepin of 1698. From these records and maps we may define the territory of the Eries as the region bordering the southern shore of

Lake Erie between the region of the Neutrals on the eastern end of Lake Erie east to the western banks of the Genesee, westward to the western watershed of Lake Erie and the Miami river and southward to the Ohio river. In the Relation of 1647-48 we find the following description of the Erie country:

This lake, called Erie, was formerly inhabited on its Southern shores by certain tribes whom we call the nation of the Cat; and they have been compelled to retire far inland to escape their enemies, who are farther to the West. These people of the Cat Nation have a number of stationary villages, for they till the soil and speak the same language as our Hurons.

Under title of "Description of the Country of the Hurons" in the Relation of 1653 there is the following paragraph:

Beyond that same neutral nation, in a direction nearly South, there is a lake 600 miles in circumference, called Ilerie, formed by the fresh-water sea, which discharges into it,—and thence by means of a very high cataract, into a third lake still greater and more beautiful; it is called Ontario or Beautiful Lake, but we were wont to call it the Lake of Saint Louis. The former of these two lakes was at one time inhabited toward the south by certain peoples whom we call the Cat Nation; but they were forced to proceed further inland in order to escape the enemies whom they have toward the West. This Nation has various territories, cultivates the fields, and speaks a language similar to the Hurons.

In the Relation of 1654 there is still further reference:

They (the Iroquois) tell us that a new war has broken out, which fills them with fear, that the Eries have taken arms against them (we call the Eries the Cat Nation, because there is in their country a prodigious number of wildcats, two or three times as large as our tame cats, but having a beautiful and precious fur). They tell us that an Iroquois town has already been set on fire and destroyed at the first attack; that this nation pursued one of their armies which was returning victorious from the shores of Lake Huron, fell upon the rear guard of 80 picked men and entirely cut it to pieces; that one of their most distinguished chiefs, Annenraes, has been taken prisoner; in a word that the Iroquois are inflamed, and are arming to repulse the enemy, and are, therefore, obliged to seek peace with us.

This Cat Nation is very populous. Some Hurons, who have scattered everywhere since the destruction of their country, have joined them, and excited this war, which alarms the Iroquois. It is said that they have 2000 men, good warriors, though without firearms. But they fight like the French, enduring courageously the first discharge of the Iroquois who have firearms, and then pouring down upon them a hail of poisoned arrows, which they can shoot off six or eight times before the others can reload their muskets.

Sagard, who went to the Huron country as a missionary in 1623, in his interesting *Histoire du Canada*, 1636, has also some notes bearing on the Eries.

**Relation of the Eries to other Iroquoian tribes.** The Eries belonged to the Huron-Iroquois linguistic stock as is patent from a review of the records. William M. Beauchamp, the distinguished authority on New York archeology, suggests that the Eries were the parent stock of the Huron-Iroquois family and further suggests that the Senecas were derived from them, possibly within historic times. There seems to be some good base in history for this opinion and the argument can not be better stated than in Dr Beauchamp's own words, quoted from his address on *The Origin and Early Life of the New York Iroquois*, delivered before the Oneida Historical Society in 1886.

The Senecas had a conspicuous place in the Iroquois league, though the last to enter it, forming the west door, as the Mohawks were the east. On the Dutch maps of 1614 and 1616, the Mohawks and the Senecas are alone designated, and for 50 years more the Dutch hardly mentioned any but these. That they were kindred to the Eries is conceded. In 1615 Champlain spoke of the Iroquois and the Entouhonorons, whom some have thought the Senecas. In the explanation of his map it is said that "The Iroquois and the Antouhonorons make war together against other nations except the Neutral nation." They had 15 strong villages, too many for the Senecas, unless the Eries were included. That the Senecas differed from the other Iroquois in religious observances, totems and clans, habits of life and other things is very clear. A marked distinction appears in their language and they were not very brotherly to the rest. Long after the League was formed they were sometimes at sword points with the Mohawks, and the French Mohawks did not hesitate to go against the Senecas, when they refused to fight against the other nations.

There is good reason for thinking them part of the Massawomekes of Captain John Smith's narrative. Early writers made these any part of the Five Nations, but later students, to identify them, as in the case of the Entouhonorons, with both Eries and Senecas, these being firm friends until 1653. Captain John Smith met these fierce enemies of Powhatan in their bark canoes on Chesapeake Bay in 1608. The general description is that of an Iroquois war party, though the name of course is Algonquin. That he did not understand their language makes this almost certain. He bought some of their weapons and increased his reputation by showing these, the Virginia tribes supposing he had taken them by force. But a Maryland trader went to the Massawomekes in 1632, and there remains no doubt that this name included the Eries and the Senecas, then or previously allied. They had palisades of great trees about their villages with galleries at the top. . . .



**Destruction of the Eries.** One of the most picturesque and tragic accounts of these people is given in the Relation of 1655-56. It is the story of their destruction. In the account they are called the Cat nation (*La Nation du Chat*). The Jesuit account is without doubt essentially correct and differs in many respects from the rather fanciful Seneca tradition. In one particular both accounts agree and that is that the Eries brought destruction upon themselves by their own folly.

The account as given in the Thwaite's edition of the Relations follows:

#### CAUSE OF WAR AGAINST THE CAT NATION

The Cat Nation had sent 30 Ambassadors to the Sonnontouahronnons to confirm the peace between them; but it happened that by some unexpected accident, that a Sonnontouahronnon was killed by a man of the Cat Nation. This murder so incensed the Sonnontouahronnons, that they put to death the Ambassadors in their hands, except five who escaped. Hence the war was kindled between those two Nations, and each strove to capture and burn more prisoners than its opponent. Two Onnontagehronnons among others were captured by men of the Cat Nation; one of them escaped and the other, a man of rank, was taken home by the enemy to be burnt. He pleaded his cause so well that he was given to the sister of one of the 30 Ambassadors who had been put to death. She was absent from the village at the time; but the prisoner was nevertheless clothed in fine garments, and feasting and good cheer prevailed, the man being all but assured that he would be sent back to his own Country. When she to whom he had been given returned, she was told that her dead brother was to be restored to life, that she must prepare to regale him well, and then to give him a most gracious dismissal. She, however, began to weep and declare that she would never dry her eyes until her brother's death was avenged. The Elders showed her the gravity of the situation, which was likely to involve them in a new war; but she would not yield. Finally they were compelled to give up the wretched man to her to do with him as she pleased. All this occurred while he was still joyfully feasting. Without a word he was taken from the feast and conducted to this cruel woman's cabin. Upon entering he was surprised at being stripped of his clothes. Then he saw that his life was lost, and he cried out, before dying, that an entire people would be burned in his person, and that his death would be cruelly avenged. His words proved true; for no sooner had the news reached Onnontague, than 1200 determined men started forth to exact satisfaction for this affront.

We have already observed that the Cat Nation is so called from the large number of Wildcats, of great size and beauty in their country. The Climate is temperate, neither ice nor snow being seen in the winter; while in summer it is said that grain and fruit are harvested in abundance, and are of unusual size and excellence.



Our Warriors entered that Country remote though it was from Onnontague, before they were perceived. Their arrival spread such a panic that villages and dwellings were abandoned to the mercy of the Conqueror,—who after burning everything, started in pursuit of the fugitives. The latter numbered from two to three thousand besides women and children. Finding themselves closely followed, they resolved, after five days' flight to build a fort of wood and there await the enemy who numbered only 1200. Accordingly, they intrenched themselves as well as they could. The enemy drew near, the two head chiefs showing themselves in French costume, in order to frighten their opponents by the novelty of their attire. One of the two who had been Baptized by Father le Moyne and was very well instructed, gently urged the besieged to capitulate, telling them that they would be destroyed if they allowed an assault. "The Master of life fights for us," said he; "you will be ruined if you resist him." "Who is the Master of our lives?" was the haughty reply of the Besieged. "We acknowledge none but our arms and our hatchets." Thereupon the assault was made and the palisade attacked on all sides; but the defence was as spirited as the attack, and the combat was a long one, great courage being displayed on both sides. The Besieging party made every effort to carry the place by storm, but in vain; they were killed as fast as they advanced. They hit on the plan of using their canoes as shields; and bearing these before them as protection, they reached the foot of the entrenchment. But it remained to scale the large stakes, or tree trunks of which it was built. Again they resorted to their canoes, using them as ladders for surmounting the stanch palisade. Their boldness so astonished the Besieged that, being already at the end of their munitions of war,—with which, especially powder they were but poorly provided,—they resolved to flee. This was their ruin; for, after most of the first fugitives had been killed, the others were surrounded by the Onnontaguehronnons, who entered the fort and there wrought such carnage among the women and children that blood was knee deep in certain places. Those who had escaped, wishing to retrieve their honor, after recovering their courage a little, returned to the number of 300, to take the enemy by surprise while he was retiring and off his guard. The plan was good but it was ill executed; for frightened at the first cry of the Onnontaguehronnons, they were entirely defeated. The Victors did not escape heavy losses,—so great indeed, that they were forced to remain two months in the enemy's country, burying their dead and caring for their wounded.

The Eries are commonly said to have been exterminated but this is not entirely true. They became exterminated only in the sense that they ceased to exist as an independent people. The surviving Eries who did not flee to other tribes became the captives of the Iroquois, who in accord with their usual policy adopted the individuals into their families and gradually absorbed them.

**Date of occupation.** From the testimony of the records it would thus appear that the inhabitants of the Ripley site must have been Eries. The testimony of the relics leads to the conclusion that this occupation was of the early historic period. Without doubt the site bridges the prehistoric to the historic. That it must have been earlier than 1654 is known from the fact that the Eries were expelled from their territories by the confederated Iroquois in 1654. That it is not as late as 1654 appears from the fact that by this date the Eries had opportunity to trade extensively with Europeans and yet few European articles were discovered. Other Erie sites, notably one forty miles east, known as the Silverheels site on the Cattaraugus reservation, explored by Prof. M. Raymond Harrington and the author in 1903, contained great quantities of European artifacts and metal. From the time the Dutch entered New York and the colony of Jamestown was settled, the Eries had opportunity to acquire articles by trade with other Indians, especially the Iroquois. Considering all things one would be strongly led to place the date of the cession of occupation before 1610. It is highly probable, moreover, that the first occupation of the site was early in the 17th century if not during the last few years of the 16th.

### Description of implements

#### *Stone*

#### Objects of rough stone

The rough and massive stone objects requiring but slight modification from natural forms to adapt them to the purposes intended, include hoes, anvils, shaft rubbing stones, pitted hammer stones, lap-stones, net sinkers, rounded pebbles, mortars and some celllike implements.

Figure 1 in plate 19 illustrates a flat piece of shale which has been roughly shaped and from its marks of use evidently has been used for a digging implement, perhaps a hoe. Objects of this class were not common, this specimen being the only complete one found on the site. Large numbers of rounded water-washed pebbles were found distributed over the site. All had been brought from the lake shore and they were not found in the undisturbed soil. These pebbles varied in size from 2 inches to 5 inches in diameter and most of them show signs of use. Many seem to have been heated in fires and others to have been used as hammers or anvils. Round pebbles were also found in the graves but nothing there was discovered

that might furnish a clue to their employment. Figure 2 in plate 19 shows one of these pebbles.

Most polished stone articles seem to have been reduced from crude forms by a picking process. Few implements resembling picks, perhaps, have been found. One crude implement, figure 3, plate 19, is of tough granite and seems to have been one of these picks. It is much battered and shows signs of long use. Notched implements, commonly called net sinkers were not common, only about a dozen being found. They were of the ordinary type found everywhere throughout New York. Figures 4 and 6 in plate 19 show two net sinkers typical of all the rest found on the knoll. Hammer stones were everywhere numerous both on the surface and in the pits. Hammers were of three types, the ordinary round pebbles used as hammers, the ball-like hammers that are battered on almost every part of the surface and the common pitted hammer stones. Some of the larger pitted stones seem to have been alternately hammers and anvils and sometimes resemble small mortars. Figure 10 shows one of this type. Objects termed anvils are the flat stones plentiful everywhere in the village site. They exhibit signs of having been used as bases upon which other stones were worked. Anvils were generally pieces of hard shale or small boulders and most of them seem to have been used for long periods [*see* fig. 8]. The flat slabs of shale and sandstone anvils sometimes had shallow hollows on one side and seem to have been used for grinding purposes. It is highly probable that in that state of primitive culture when everything convenient must be utilized, one utensil served as many purposes as could be devised for it.

A number of smoothed and worked stones found in refuse pits and also in graves are thought to be potters tools. One was found in a pit containing a large quantity of partly worked clay. One of these stones is shown in figure 9 in plate 19 and another in figure 7, plate 25. One interesting specimen of a massive stone implement is the large mortar found in pit 50. It weighs about 200 pounds and was found at one end of a stone-floored pit. It must have been occasionally turned over for both sides show signs of use though only one side was used as a mortar. Mullers or rounded pebbles must have been used to crack and grind the corn or other substances. Long cylindrical pestles would not have served the purpose. Four small celtlike implements were found in refuse pits. These had been formed from natural water-washed pebbles the ends of which had been sharpened to an edge, this being the only work done to form the implement. It is hardly possible to state

definitely for what purpose these miniature celts were used. Certainly they could not have sustained rough usage [see fig. 9, 11, pl. 20].

A grooved stone sometimes called an arrow shaft smoother is figured in text figure 20.

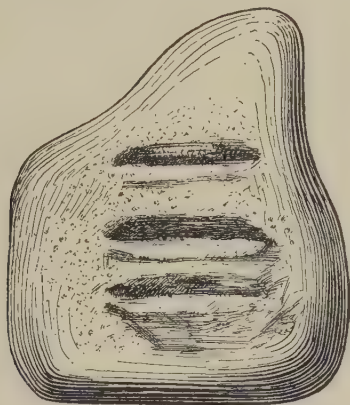


Fig. 20 Arrow shaft rubber and polisher

#### Polished stone objects

No polished stone articles of the type usually termed ceremonial were found in the course of the excavations although a gorget was found on the hill to the east of the site, unless the very interesting polished bar of Portage shale found in grave 96 is to be called a ceremonial [see pl. 20, fig. 4]. There is a bar of this description in the museum collection which came from Jefferson county and the writer secured another 15 inches long from Mayville, Chautauqua co. All of these specimens have sharpened ends like celts and for the want of a definite name the writer proposes the term "bar celt."<sup>1</sup> Thruston in his *Antiquities of Tennessee* in plate 16 figures an implement resembling a bar celt. He describes it as the "... long delicate crescent-shaped 'implement' of highly polished syenite, represented in plate XV (author's collection), also probably belongs to the ceremonial class. It is 11½ inches long. Originally it was probably 12 inches as the point has been broken. It was found by Theodore Haslem in North Nashville (Tenn.)." Objects of this kind are probably rare and but few have been described. All three specimens in the State collection are flattened on the bottoms and rounded over the back with gradually tapering ends.

<sup>1</sup> The writer has since examined another bar celt found by Mr. William T. Fenton of Conewango Valley.



The ordinary celts are of the usual type found everywhere in the Erie cultural area and in general throughout the Iroquoian. Most of the specimens are equilateral, there being none of the adz, "flat-bellied" or "turtle-backed" forms. The majority of celts were found in graves although a few are from refuse pits. Three entire celts and two broken celts were found in a "feast pit" previously described [pit 80]. One small double edged or "bitted" celt is shown in text figure 13 [also fig. 13, pl. 20], and came from grave 92.

**A stone press.** One of the most interesting objects of worked stone found in the vicinity of Ripley is a stone press, probably used for pressing the juice from small fruits. The bottom portion is hollowed out and has a Y-shaped groove incised in the bottom. The base of the Y runs out into a lip from which the liquid or juice was designed to be poured. The upper portion fits exactly into the lower. This utensil is from the collection of William A. Spears which was purchased for the State Museum. The writer has never seen a press of this kind before in any collection and the specimen is probably unique [see pl. 21].

#### Stone tobacco pipes

The stone pipes are perhaps the most interesting forms of polished stone articles. Those discovered exhibit many interesting features.

Two pipe bowls carved from sandstone are of interest [pl. 22, fig. 2, 3]. Figure 2 is bell-shaped with notches cut around the edge and a cross cut in the rounded bottom of the bowl. In Joseph D. McGuire's *American Aboriginal Pipes and Smoking Customs*, contained in the National Museum Report of 1897, page 428, figure 52, is figured a pipe from Accotink, Va. very similar to this specimen. Of these pipes Dr McGuire says:

Among the bowl pipes of vaselike form they are found to vary from those which are as broad as they are long, specimens having a height four times as great as their diameter. This type is usually made from steatite, or kindred stones, capable of resisting heat, though, as with most American pipes, there are numerous exceptions to the rule. One in the Smithsonian collection, of gray sandstone was found in a cave on Tar river, Yancy co., North Carolina, and another found in a kitchen heap in Kanawha county, West Virginia, which was made from a brown stone. Other specimens are known of this type made from partially decomposed limestone, feldspar, and even fossil coral. The writer is informed by the Rev. W. M. Beauchamp that this type is frequently encountered in Onondaga county, New York.



Pipes of this urn-shaped type are found also along the headwaters of the St Lawrence, on the south shores of Lake Ontario and Lake Erie, and along the upper waters of the Ohio and its affluents, a typical specimen being from Accotink, Virginia, while yet other specimens in the United States National Museum collection are from New York, Pennsylvania, Ohio, West Virginia, Kentucky, Tennessee, Indiana and North Carolina.

If the area of distribution of the urn-shaped pipe is compared with the tribal distribution first known to the whites, as it appears on Powell's linguistic map, it will be seen that this especial form of the bowl pipe is found in Iroquoian territory on the north, through the Algonquin on the south into the southern Iroquoians. It should be remembered that this area corresponds, reasonably, with the territory influenced by French trade before the advent of the English. The territory is also in the line of travel from the St Lawrence to the Ohio. The writer is unable to determine how far this urn-shaped type of pipe has been governed by European influences. Its contour is similar to pottery bowls from Tennessee, specimens of which are in the United States National Museum collection.

Figure 3, pl. 22 is of an egg-shaped pipe bowl of the same material as the one just described. Around the middle of the bowl is a groove which meets at the stem hole. In Moorehead's *Prehistoric Implements*, page 334, is figured one of these pipes from the Ohio valley. Moorehead remarks that its peculiarity lies in the fact that it is grooved around the center. There is nothing in either of these pipes to suggest European influence as far as the writer can discover. The drilling and workmanship seem to have been done with stone implements entirely. Figure 4 is a pipe bowl cut from a hardened clay. The surface has weathered black but the underlying color is red. In form the pipe is claw or beaklike and is similar to other forms found in the Iroquoian area. The bowl hole is small comparatively and the stem hole large and conical as is the case with all the pipe bowls of the collection. This pipe is from grave CV and was found with pot no. 471 [see text fig. 16]. A small pipe carved from the local shale imitating this form was found in an ash pit, perhaps a grave fire, near this grave. The pipe is pictured in figure 1, plate 22. A small stone pipe with a short neck into which a reed stem was evidently designed to fit is shown in plate 22, figure 7. This pipe is of about the same material as the large clay form pipe and has two parallel lines incised on the underside of the neck. It was found in grave CI, pit 141, and lay on the arm of a male. The pipe represented by figure 6, plate 22 is the only stone pipe of the stemmed type found. It is carved from a species of serpentine and is smoothed and polished. In the process of drilling the stem the drill penetrated too near the base of the bowl and there is a

small hole to be observed in the specimen. The shape of the opening suggests that the bowl had been rubbed down after the stem hole had been drilled and that this hole had been encountered then. The form of the stem hole seems to indicate the use of a metal drill. The grave in which this pipe was found is pictured in plate 15.

Perhaps the most interesting of the pipes is the one shown in plate 22, figure 5. It is clearly the effigy of some animal, probably some mythical monster. Placed face down it appears to be a grazing animal. In this position the hump formed by the bowl suggests a buffalo but the large bulbous tail and the shape of the head do not point to such an animal. The material is rather puzzling. In color it is a bluish white and it appears to be some species of talc or steatite but a test for hardness disproves this. Mr D. H. Newland, Assistant State Geologist, made an analysis and pronounced it to be an Ohio kaolin. The broken granular surface of the pipe near the bowl suggests that it had been molded from a rather stiff clay and the roughened top of the head suggests that a portion has been broken off and that an attempt had been made to smooth it over by rubbing. It has there the appearance of baked pottery the surface of which has been rubbed down. The glazed surface however has not been produced and this suggests that the pipe has been hardened in the fire. Yet while the pipe from these appearances seems to be kaolin it seems remarkable that instead of having the bowl and stem hole molded, as is customary with clay pipes, that these holes should have been gouged and drilled out, as they manifestly were. The hind leg on the side visible in the photograph is incised but on the reverse side the three lines have every appearance of having been molded as if in plastic clay. It may be that the clay was found in a semihardened condition and that it was formed into the pipe by both processes and afterward hardened by firing. The pipe, while the effigy is unusual, does not differ in general form from other effigy pipes found in the region. There is nothing in the workmanship to indicate the use of European tools or influence [see description of grave 92 and pl. 11].

One of the interesting features about these pipes is that the bowl capacities are small in comparison with modern European pipes. Probably less tobacco could be contained in one than is held in a modern factory cigarette. The bowls of the clay pipes were a little larger. No tobacco ashes were found in any of the stone pipes.

#### Objects of chipped flint

Objects of flint were numerous especially in graves where complete outfits for their manufacture were found in several instances.

Complete flint articles were not numerous on the surface although there was an abundance of chips and broken blades. The ash pits contained numbers but the graves the most. The lack of finished points on the surface may be due to the fact that each year as the ground was plowed the arrow points were picked up. The older inhabitants say that bushels of arrows and "skinning stones" have been carried off. It is probable that most of the durable objects left on the surface when the site was deserted by its aboriginal inhabitants have been removed by the white tillers of the soil who followed them at a later period and whose curiosity was aroused by the strange artifacts which were turned up by their plows. At any rate very little was found except below plow depth.

Of the points that might be safely termed arrowheads there were but two that had notched shoulders. With these exceptions all the arrowheads were triangular. The workmanship was good and most of the points were thin and evenly worked. The material in general was gray flint or chert but some points were found made from

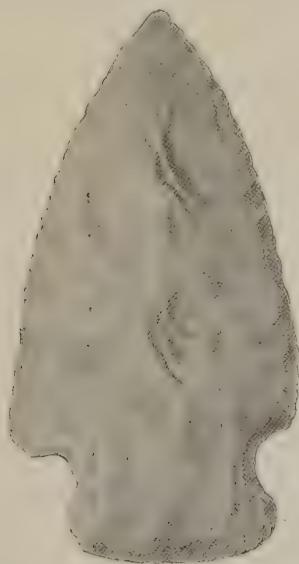


Fig. 21 Spear or knife of translucent chalcedony. The only form of this implement found in the site

yellow jasper. Most of the points found on the eastern slope of the knoll were of this material. The various forms of triangular flints are shown in plate 24.

Of the flint blades, not arrow points, only two had notched shoulders. One of these was a beautifully wrought blade, a spear

or a knife, of white chalcedony. It is pictured in figure 21. There were several well shaped oval blades and a few of the so called "leaf shape." Scrapers were fairly common, drills rather rare and spears rarer still. There are a number of forms that may safely be called knives. Plate 23 illustrates the range of forms of the larger flints not arrowheads.

Triangular arrow points are commonly called "war points" and notched and barbed points, "hunting points." It does not necessarily follow, however, that these terms are correct, although quite popularly held. The Ripley Eries as well as those of other sites were great hunters, as is manifest from the great quantities of animal bones found in the refuse pits, and yet at Ripley only two so called "hunting points" were discovered. The great majority of projectile points were of the triangular type and these were found in the ash pits among animal bones as well as in graves with the bones of warriors and women. It would appear therefore, that the triangular points were used for hunting as well as war. Sites of Preerian occupancy in Chautauqua county, and elsewhere in New York, yield only the barbed or shouldered "hunting point," no triangular arrow heads being found. Yet this fact does not point out a people who knew only of hunting and nothing of war. Specific terms defining the use of such implements are, therefore, to be avoided. They are more accurately described by their forms as, *triangular, notched*, etc.

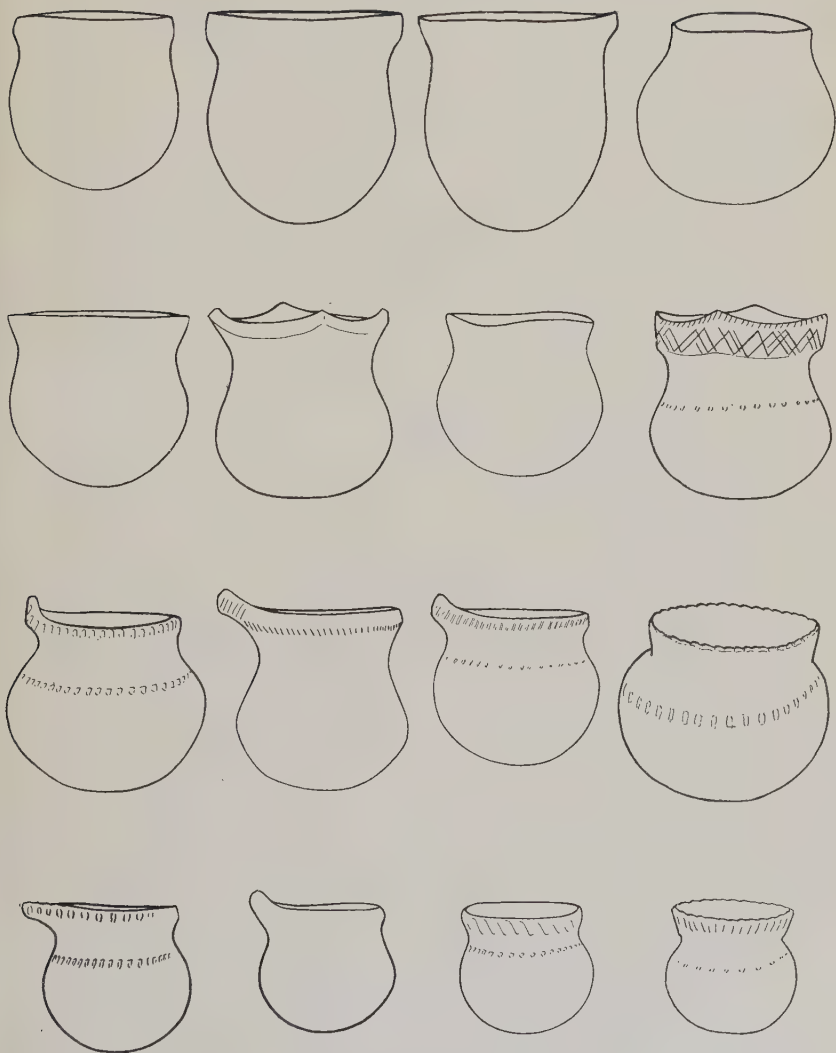
### *Earthenware*

#### **Pottery vessels**

All of the entire or nearly entire pottery vessels, save two were found in graves. Most of them exhibited signs of prolonged use. A few seemed to have been especially made for funeral urns and some had been evidently molded in great haste and poorly tempered and baked. Such pots were in every instance broken and the potsherds were soft and flaky, not hard and gritty like good pottery.

The material of which the pots were molded seems to have been the local Erie clay found everywhere in the region overlying the shale beds. The tempering material in all the specimens discovered is invariably pulverized stone, quartz or granitic rock. In no instance is shell to be found. Most of the pots are of a salmon red color varying from a sooty red to a light orange. The majority are stained by smoke and carbonized grease. This charred grease is especially noticeable around the inside of the rim where the in-

Plate 18



Range of pot forms





crustations are sometimes 5 millimeters thick. In thickness the pottery varies from 2 millimeters to 2 centimeters in some fragments. In capacity the vessels range from 5 cubic centimeters in the toy forms found in grave LI, pit 96, to 5 quarts, 4700 cubic centimeters.

The general type of the vessels is Iroquoian but as has been elsewhere stated they differ in many respects from the central New York specimens of the middle 17th century as well as from Erie vessels of that period.

A large percentage of the pots have one raised point that varies from a small knob to a well developed pitcherlike nose. Pots of this type are found in Ontario and Jefferson counties. The form of one of these pots is shown in text figure 22 which gives the shape at different positions. Another characteristic of the pots

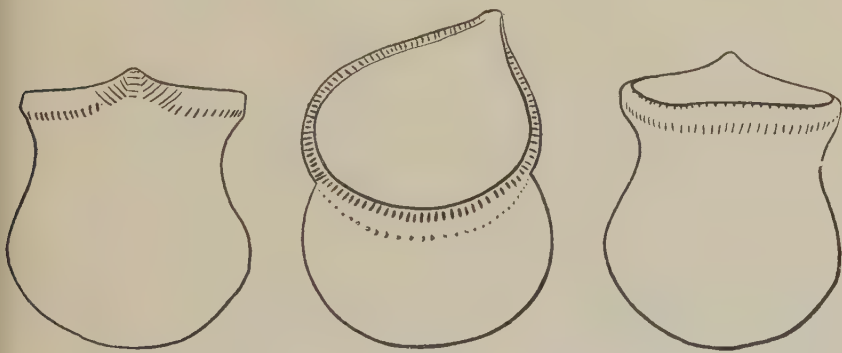


Fig. 22 Three views of pot F 476

from this site is the row of dots that encircles the pot where the belly meets the neck. Cushing's theory that pots with square tops and line decorations about the rim were modeled after bark baskets appears strengthened by some of the forms which had not only decorated square tops but had the stitching imitated by the dots around the neck, as appears on the bark baskets to which Cushing referred.

Pottery clay in masses, tempered and partly worked, was found in a number of the ash pits. Some of these partially worked masses of clay even yet show the imprints of the potter's fingers [see pl. 25, fig. 1, 2]. One fragment of a coil was found in an ash pit where it had become hardened and preserved [see pl. 25, fig 3]. Several crude partly formed pipe bowls and pot bottoms were found, possibly the work of children [see pl. 25, fig. 5, 6]. Most of the pots have smooth surfaces although many were found marked with

a cord-wrapped paddle. Several smoothed paddlelike stones were found in pits containing clay in masses and these are thought to be potters paddles used for working over the surfaces of pots. All have rounded ends and at least one squared side as if to form a blunt scraping edge. One of these implements is shown in plate 25, figure 7. The serrated rib illustrated by text figure 23 may have been used to roughen the surfaces of partly formed vessels to facilitate the process of shaping the wall which was afterwards smoothed.



Fig. 23 Serrated rib

No entire pots were found with any trace of color decoration. One sherd was found, however, which has two parallel bands of brown running over a background of yellowish red. Whether this is simply an accident or intentional is hard to determine as the sherd is small. The lower band is well defined and seems to be inlaid into the pottery [fig. 24]. One broken pot found in a grave had an ear like some of the Ohio forms. These two potsherds were the only departures from the usual Iroquoian forms found in the site and suggest contact with other stocks.

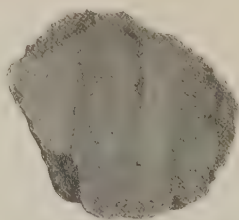


Fig. 24 Sherd

### Pottery pipes

Of equal interest with the pottery vessels are the earthenware pipes all of which were found in graves. More than a dozen fragments however were found in ash and refuse pits. The clay pipes are all Iroquoian in form and decoration and are similar to central New York Iroquois pipes of the early part of the 17th century. All of the pipes are gracefully made and reveal an artistic hand.

Figure 1 in plate 31 shows the pipe found in grave 14. The bold incised lines that form the decoration are of exceptional interest and are a departure from other forms. The nipplelike stem seems to have been designed as a support over which a wooden stem was fitted, rather than as a mouth piece. The pipe contained charred tobacco which has been carefully preserved intact in the bowl. A photograph of the grave in which the pipe was found is shown in plate 7. The writer has never seen a pipe of this kind in any collection nor illustrated in any work on archeology, and the specimen is probably a rare one if not entirely unique.

The long square-topped pipe shown in figure 2 of plate 31 is the so called "Huronian" form. It is made of the ordinary clay from the vicinity but has become stained a dark brown. In texture this pipe is perhaps the best example of pottery found in the site. It is very hard and fine grained.

Two views of the two-faced pipe found in grave XX, pit 44 are shown in plate 31, figures 3 and 4. The front view was taken just after the pipe was removed from the grave and was yet covered with particles of sand, as the picture shows. The side view gives a much better idea of the object and shows the two faces, both of

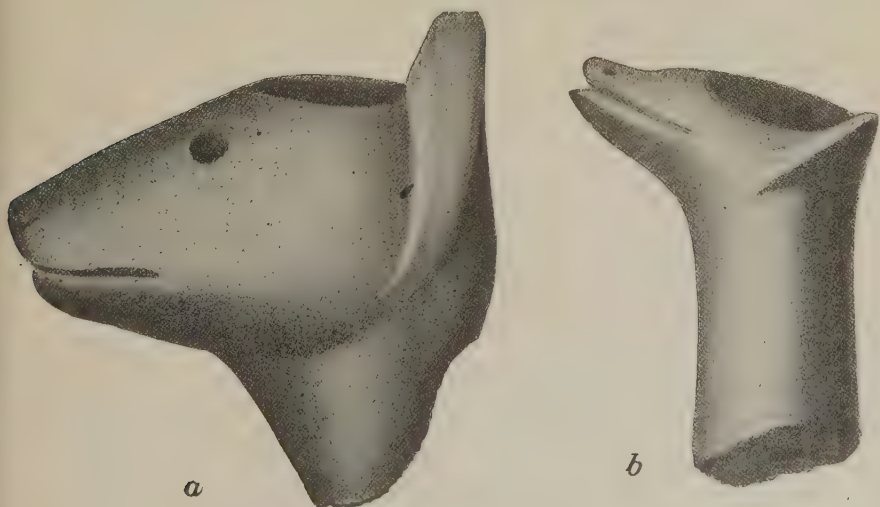


Fig. 25 Pottery pipe bowls

which are remarkably alike, the face away from the smoker, however, being more perfect in workmanship. As is the case with all the earthen pipes shown in the plate, this pipe contained charred tobacco.

The trumpet-shaped pipe shown in plate 31, figure 5, came from grave LXXXVI and was found with pot F446 [pl. 28, fig. 6], and two celts. In comparison with the other stemmed pipes the stem is shorter but does not seem to have ever been broken.

The wide flaring platform-topped pipe shown in plate 31, figure 6, is a modification of the trumpet form. The top or platform is flat and quite perfectly circular. This type is common almost everywhere in the Iroquoian region but particularly so in the Erie region. Many of this type are found in prehistoric Onondaga sites in Jefferson county.

Two interesting pipe bowls in the form of animal heads were found in refuse pits. One is plainly a bear's head and is of polished black clay. The other is of ordinary red clay. It is not easy to decide just what is meant to be represented by the effigy. Some who have examined it have thought it intended for a fox [*see* text fig. 25a, b].

### *Bone*

Articles of bone and antler were particularly numerous and varied. Except for about 10 specimens all came from ash pits.

The great abundance of awls points out their extensive use. The awls were of the usual forms, flat, cylindrical, tubular handled, and those having a joint end. There were also awls made from small splinters. The principal forms are shown in plate 32.

Bone beads were found in every ash pit and varied from crudely broken sections of bird and small mammal bones to well shaped and highly polished cylinders. That so many should have been thrown in amongst the refuse seems rather remarkable and almost seems to indicate something more than accident. These beads ranged from  $\frac{3}{32}$  inch in diameter to  $\frac{5}{8}$  inch although the majority were about  $\frac{1}{4}$  inch in diameter. One form [*see* pl. 33, fig. 5] has the appearance of a handle. The range of forms of the larger polished bone beads is shown in text figure 26.

Perforated elk, wolf and bear teeth were found in refuse pits. Perforated bear tusks were found previously by local collectors of Indian relics. Figure 1 in plate 34 is that of a bear's molar. It is a beautiful specimen and highly polished. There were several perforated elk teeth but none with complete perforations. Each had been broken. A perforated turtle shell fragment is shown in figure 11, plate 34, and came from an ash pit. Other broken perforated carapaces were found in graves. The small spatulate implement



shown in plate 34, figure 12, is nicely formed and polished. Perhaps it was a pottery marker. Two polished pieces of bone

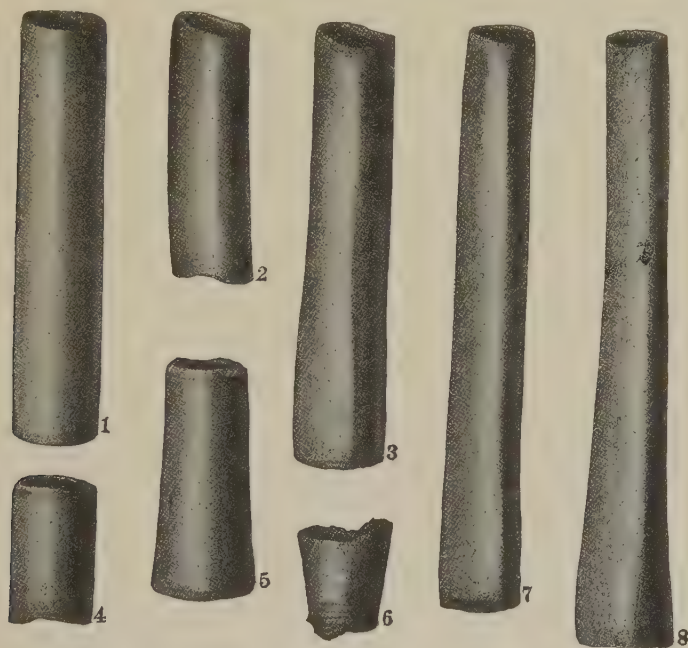


Fig. 26 Bone heads

smoothed on all sides were found in refuse pits. The one shown by figure 13 is grooved on either side. A bone knife blade, the point of which is broken, is shown in figure 14. Raccoon penis bones were found in several pits. All are smoothed and show signs of use, perhaps as hooks for coarse weaving. Figure 21 is that of a long flat bone implement resembling a shuttle. It is a fine specimen, being nicely smoothed and polished. The notch at one end is smoothly worked and shows no signs of being a broken eye. Figure 24 is probably that of a broken bone needle. Needles were rare in the site. Deer phalanges were found in abundance and most of them are worked to some degree [*see* pl. 34, fig. 5, 6]. Numbers were flattened on one side and some were worked down to cones with a perforation at one end, the end nearest the tip. These cones resemble the cups used in the cup and awl game common among the early Hurons and are probably parts of such apparatus [pl. 34, fig. 4, 8].

Beaver teeth seem to have been used for scraping or cutting.

Several specimens are worked smooth at the bases [see pl. 33, fig. 1-3]. One has a slot running from the edge well toward the top.

One very interesting specimen is that of a bone fishhook in process. If finished it would have been a small delicate hook. No sign of a barb appears. The specimen resembles some of those figured by Prof. F. W. Putnam in *The Way Bone Fish Hooks Were Made in the Little Miami Valley*.

A pendantlike tube is shown in plate 33, figure 9. Both ends show the marks of cutting as do both of the pendants of deer's jaws shown in the next figures. Plate 33, figure 10 is notched and perforated lengthwise.

It is perhaps not customary to rank deer jaws as implements. Nevertheless the Senecas up to within the last 10 years have used them when they could obtain them, for scraping corn from the green cob. The sharp teeth were raked over the kernels to break and cut the hulls and then the hold on the jaw changed and the milk and meat scraped out with the sharp edge that is nearest the chin. The writer secured one of these jaws in 1903 for the American Museum of Natural History. It is entirely probable that the Eries used deer jaws for the same purpose, as they were Iroquois and closely related to the Senecas. The Senecas have a name for the jaw when used as an implement of this kind, a name for the process, and called the corn so prepared "already chewed." Figure 27 is a drawing of one of these "jaw corn scrapers."



Fig. 27 Deer jaw scraper

A serrated rib from an ash pit is probably an implement of some kind. Its notched edges suggest its employment as a potter's tool. Perhaps it was used to roughen the surface of the clay which was afterward smoothed down [see text fig. 23].

### *Antler*

Antler objects were fairly numerous, though not of great variety. Those found in refuse pits were well preserved but those from graves were decayed and crumbling.

The antler objects from the site include flaking tools, punchlike implements, sometimes called pitching tools, chisellike implements, picklike prongs of antler, arrowheads, hoes or digging implements and 1 antler ball. There were several pieces of antler showing marks of cutting and other working. The large trowellike object shown in plate 35, figure 1, is probably an antler hoe or spade. The edge is worn and smoothed, evidently by use in the earth. Two other hoes are shown in the same plate [fig. 5, 10]. The larger hoe seems to have had one side cut as if by a metal knife. The "hoes" are all of moose horn. A small chisellike implement is shown in plate 35, figure 2. It is worn and polished and the cutting edge is sharp for such material. A larger chisel or pick is shown in plate 35, figure 4, and seems to have the handle whittled into shape by a metal knife. Punchlike objects were fairly common and seem to have been parts of an arrow maker's outfit. Indeed they are commonly called "pitching tools" and experiment shows that they are useful in making the long body chips which must sometimes be made to properly form a flint blade. These tools are of two types. Plate 35, figure 9, shows one which has a head. Two antler arrowheads were found. Plate 35, figure 8, represents the better one. It is well shaped and polished but the hole for the shaft is not deep. One flattened ball was found and is similar to the game balls used now by the Iroquois and called "deer horn buttons" [see pl. 35, fig. 6]. Chunks or pieces of worked antler were frequent. One shown in figure 17 is that of an antler base from which the upper part has been cut with a metal knife.

### *Shell articles*

Among the interesting classes of articles are those of shell. The very interesting necklace of shell shown in plate 14 is the best specimen of art in shell found at the Ripley site. It came from grave XCIII, pit 133, and was found about the neck of the skeleton. The better preserved gorget was found in the bend formed by the curve of the front portion of the lower jaw. The necklace is made of discoidal shell beads beautifully made. They are quite uniform and the perforations are perfectly centered. In specimens which have not weathered the edges are even. The two gorgets and the long pendant from this necklace are shown in plate 36 as is a series of discoidal beads illustrating the stages of disintegration. A perforated *Unio* shell was found in pit 46 and a shell bead of the older form came from pit 3 [see pl. 36, fig. 5].

*Copper articles and objects preserved by copper*

With the exception of one specimen all copper articles came from graves. An analysis of these articles by the mineralogist Mr H. P. Whitlock indicated that they were all of European copper. The two arm bands contained traces of zinc.

Most of the copper articles came from grave LI, pit 96, and a description of them as they were found will be found under that head. The two bracelets which encircled the arm of the skeleton are shown in plate 37, figures 1, 2. These bands yet retain upon their corroded surfaces the impressions of the skin of the arm against which they rested, although the pictures do not show them well. Finger prints are noticeable on several of the rings and one has the tactile impression on the inner side. Figures 5 and 10 of plate 37 are of two rings which have these impressions upon them. These rings are of the common rolled type made from bands of sheet copper. The arm band fragment shown by plate 37, figure 4, is a fine specimen of rolled copper work.

In graves where copper was present the animal or vegetable matter in immediate contact was preserved by the copper salts. The substances so preserved include wood, bark, herbs, deer hair, deer-skin, thongs, human skin, flesh, bone, nails, hair and scalp fragments.

Figure 3 in plate 37 is that of a rolled copper bead which yet contains the skin thong. Pieces of bark and deerskin massed together are pictured in plate 37, figure 7. The shreds of bark are plainly visible but the skin does not show well. In the same plate figure 11 is a piece of wood preserved by the salts of copper from the ring that encircles the opening. The form of the object suggests a false-face eye. Plate 37, figure 9, is that of a mass of vegetable matter, possibly some herb or tobacco.

*Iron*

But few pieces of iron were found. Of those discovered in graves or ash pits none bore the semblance of finished or complete utensils. In a few graves and in one ash pit short rectangular bars were found and with them chunks of flint, probably parts of fire-making apparatus. In grave XCIII a portion of a small ax, adz or chisel edge was found. It had been broken at a perforation.

**Carbonized substances**

Vegetable matter preserved by carbonization was found in nearly all of the ash pits but so crushed as to be unrecognizable. Charred

wood and bark were found in quantities in most of the pits and the pieces varied in size from small particles to chunks five inches in length and an inch or two in diameter. Charred corn in small quantities was found in several refuse pits and seems to have been the ordinary variety found in most Iroquoian sites. A few beans, squash seeds, hickory nuts, butternuts and plum stone in a charred condition complete the list of the foods preserved by carbonization. Charred corn was found in several of the graves and in one grave the decayed handle of a celt was found. Charred bark and wood were frequent in the graves and fragments of what seemed a bark dish were found in one grave. A long wooden stem, probably a pipe stem, was found in an ash pit and a few minutes afterward a clumsy visitor stepped upon the box in which it was temporarily placed and crushed most of it. A small section, however, remained.

### Pigments

The pigments were ochers, graphite and bitumen or asphaltum. Charcoal may also be included. Quantities of red ocher were found in some of the graves and some skeletons lay in deposits of it. In other graves the ocher was in little deposits as if it had been inclosed in a bag that had afterward decayed.

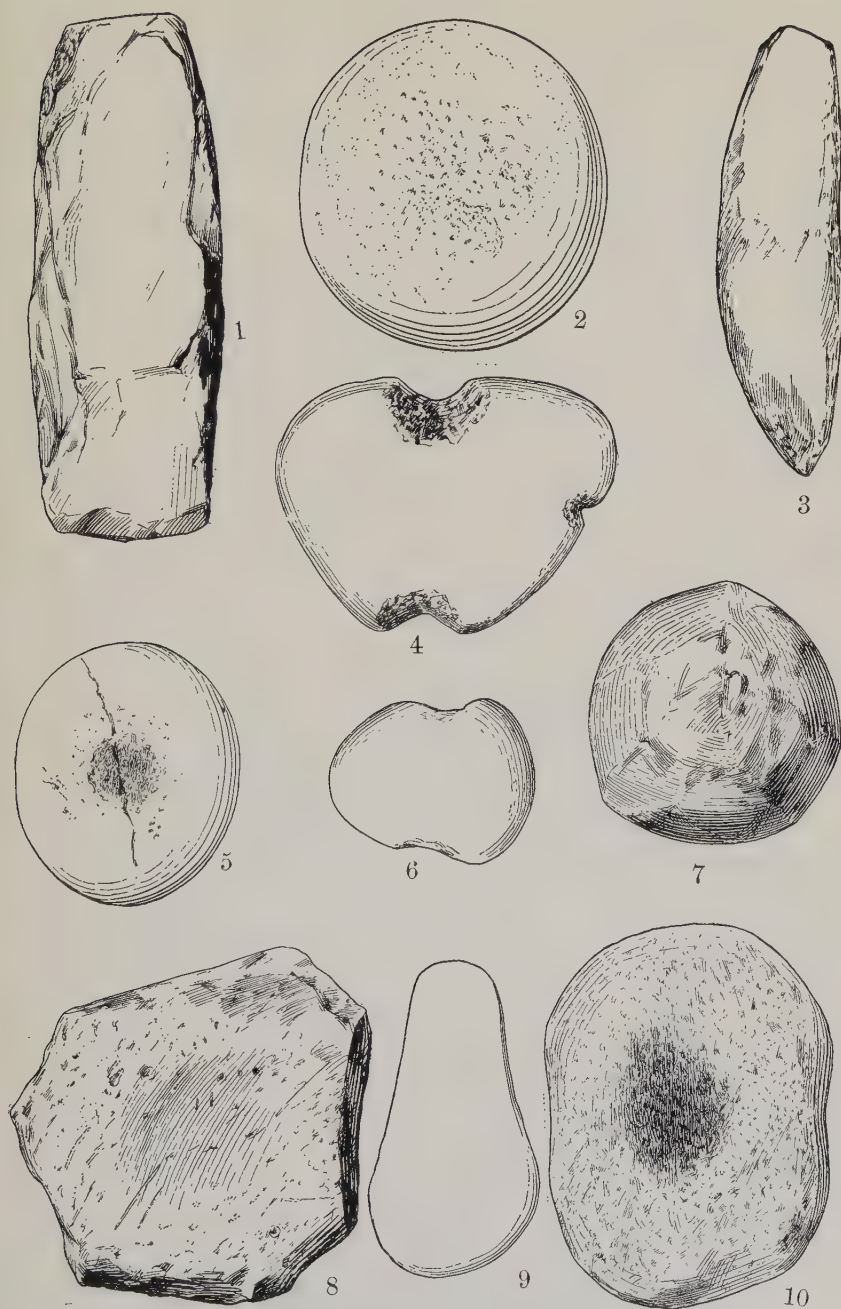
### Articles found in vicinity

Objects which are found in the vicinity of Ripley but which were not found on the site are the following: Of the older occupations: gouges, grooved axes, mica plates, inscribed stones, monitor pipes, banner stones, bird shaped stones, gorgets, tubular shell beads, etc.; and of the later occupations: notched and shouldered arrow points and spears, shell beads in numbers, wampum, iron tomahawks, lead objects, copper or brass arrow points, glass beads, etc.





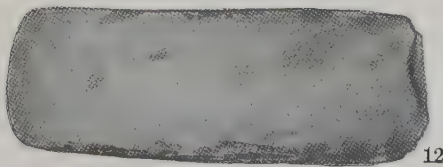
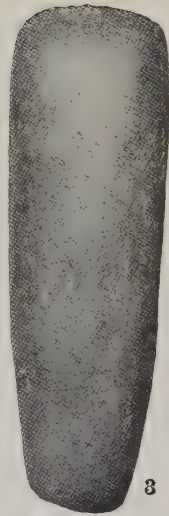
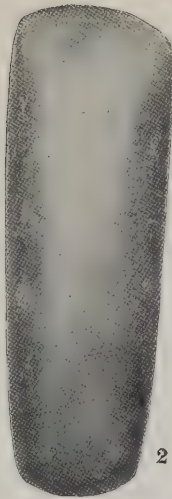
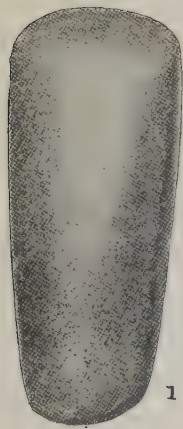
# Plate 19



Types of rude stone implements improvised from natural pebbles, the shape of which required only slight modification to adapt them for the purposes intended. 1=Hoe or rude celt. 2=Hammer. 3=Pick. 4, 6=Net sinkers. 5=Pitted hammer stone. 7=Hammer. 8=Anvil and grinding base. 9=Smoother. 10=Pitted hammer stone and small anvil



Plate 20

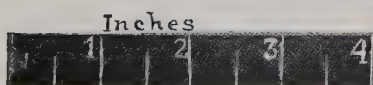


Types of celts. One half reduction





Plate 21



Stone press for pressing juice from fruits and berries. This unique specimen is from the William A. Spear collection and was found at Ripley



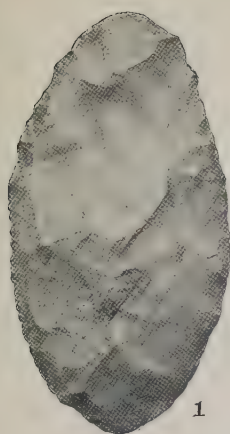
Plate 22



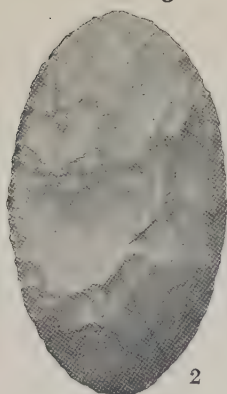
Stone pipes. 1, 2 and 3 are from the topsoil or general occupied layer ;  
4, 5, 6 and 7 are from graves



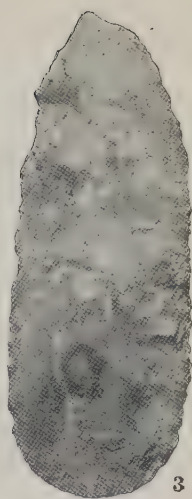
Plate 23



1



2



3



4



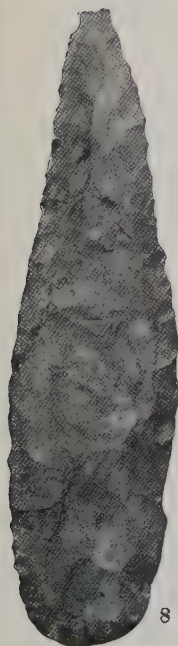
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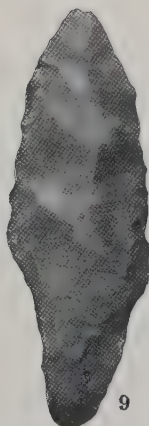
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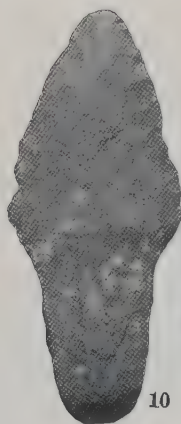
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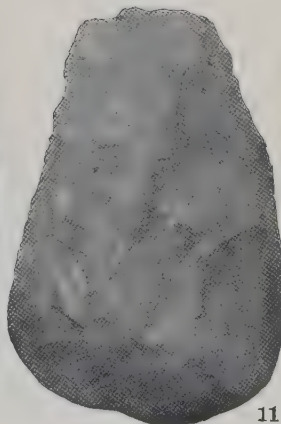
8



9



10



11

Types of chipped flint implements not arrow points. Figures 4 and 11 are scrapers and 7 is a rude drill. See also text figure 21





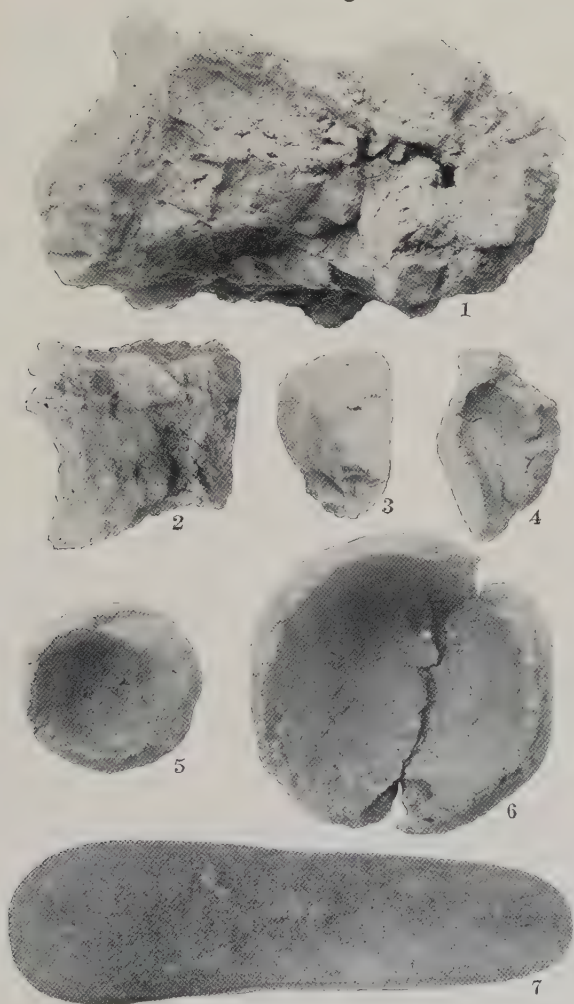
Plate 24



Range of size and form of the triangular flint arrow heads



Plate 25



Clay in process. Figures 1 and 2 are clay masses containing pulverized granite and yet bear the finger impressions of the potter. Figure 3 is a short section of a coil. Figure 4 is that of a rude pipe bowl fragment. 5 and 6 are toy bowls from pit 96. 7 is probably a potter's paddle





Plate 26



Pots with raised rim points. From graves



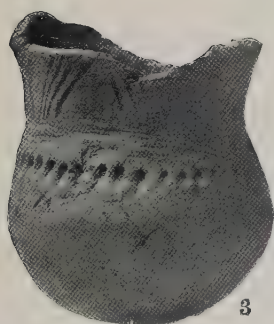
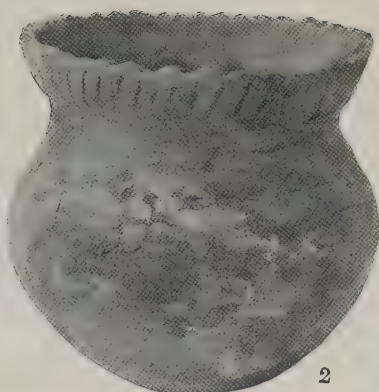
Plate 27



Fig. 1 Pot from grave 1, pit 4  
Fig. 2 Restored pot from burial LXXXI



Plate 28



Types of the smaller pots





Plate 29



1



2

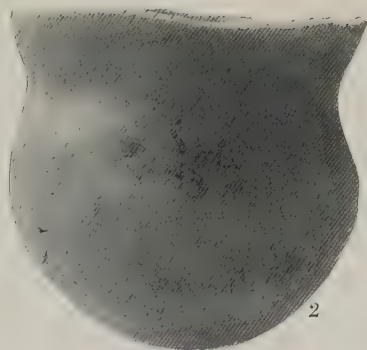
Types of plain and decorated pots having a raised point or lip on the rim



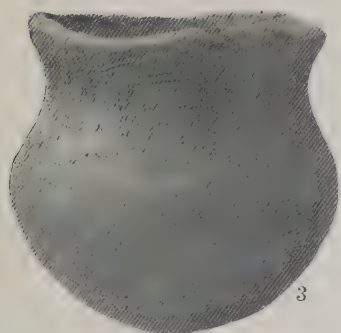
Plate 30



1



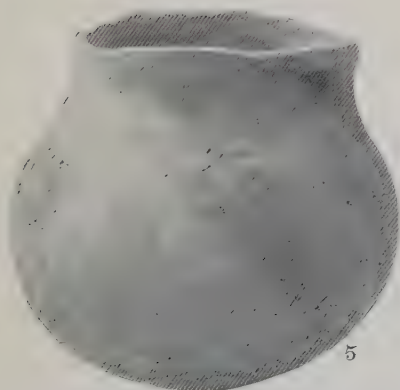
2



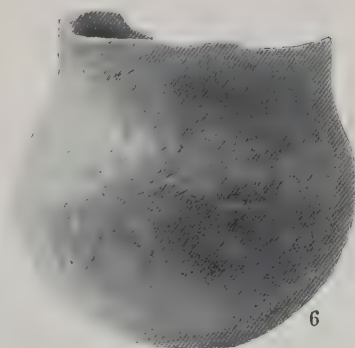
3



4



5



6

Figures 1, 2 and 3 are of cord-marked pottery vessels. The surface of the pot shown in figure 4 seems to have been marked with a brush of twigs. Figures 5 and 6 are of plain pottery





Plate 31



Pottery pipes from graves. 1 is a massive clay pipe bowl decorated with deeply incised lines and has a stem that might serve either for a mouthpiece or as a nipple over which a stem of wood might be inserted. 2 is from grave XXV and is the so called Huronian type. 3 and 4 are two views of the two faced pipe from grave XX. 5 is a trumpet pipe from grave XX. 6 is a flat round topped trumpet pipe from grave LXXV. All these pipes contain charred tobacco as when found



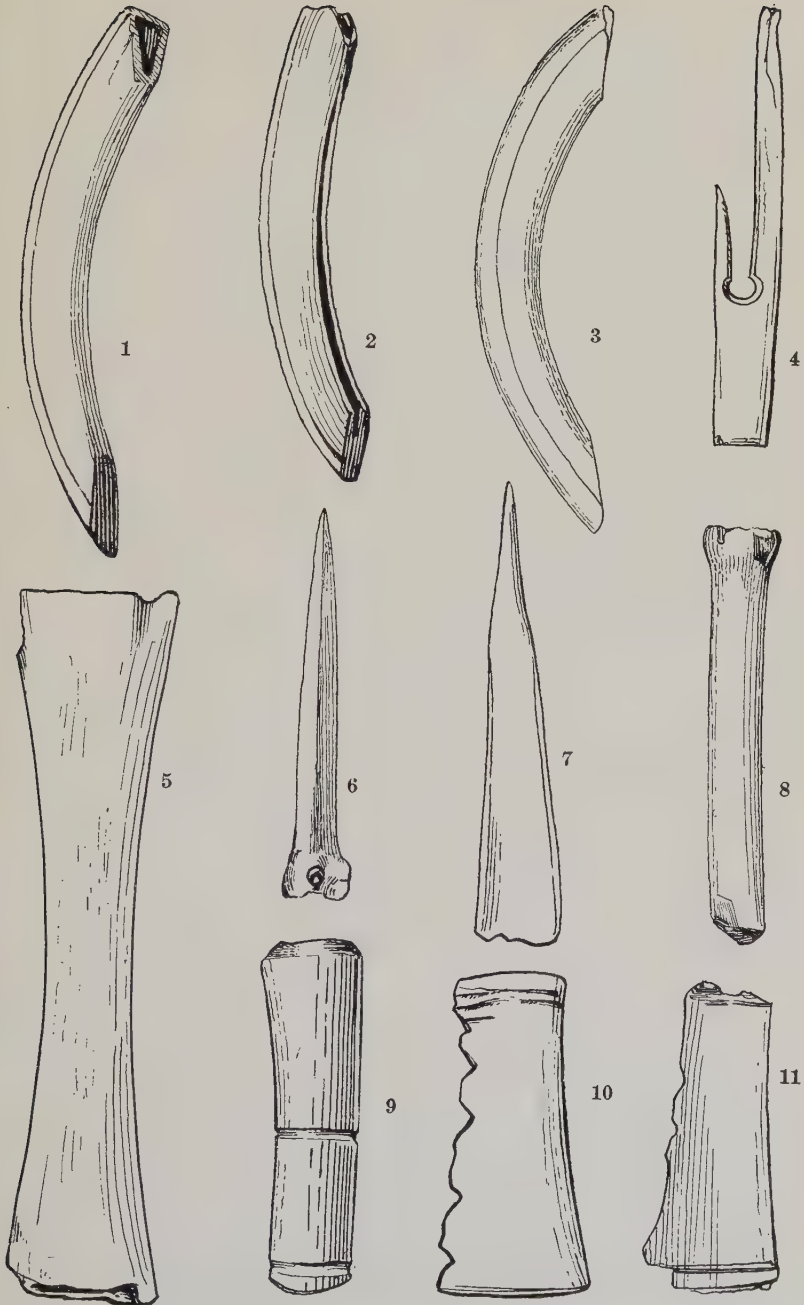
Plate 32



Types of bone awls from ash and refuse pits



Plate 33



Various bone implements from refuse and fire pits





# Plate 34



Various bone implements from refuse and fire pits



Plate 35

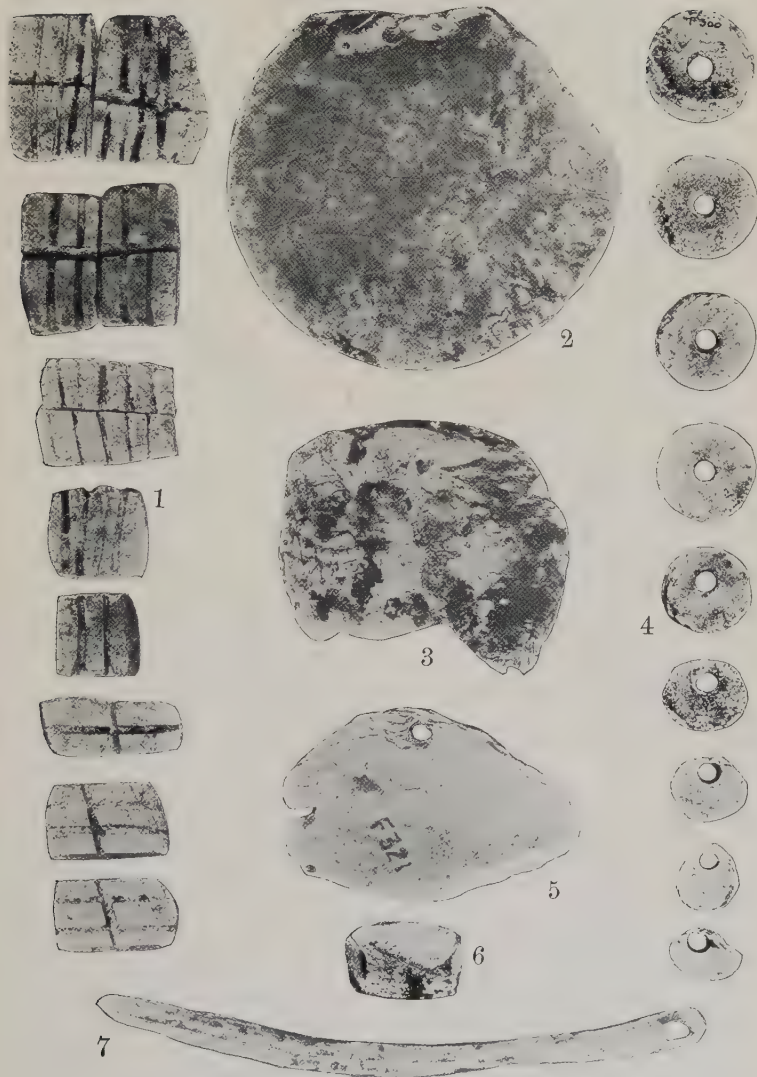


Various antler implements from ash and refuse pits





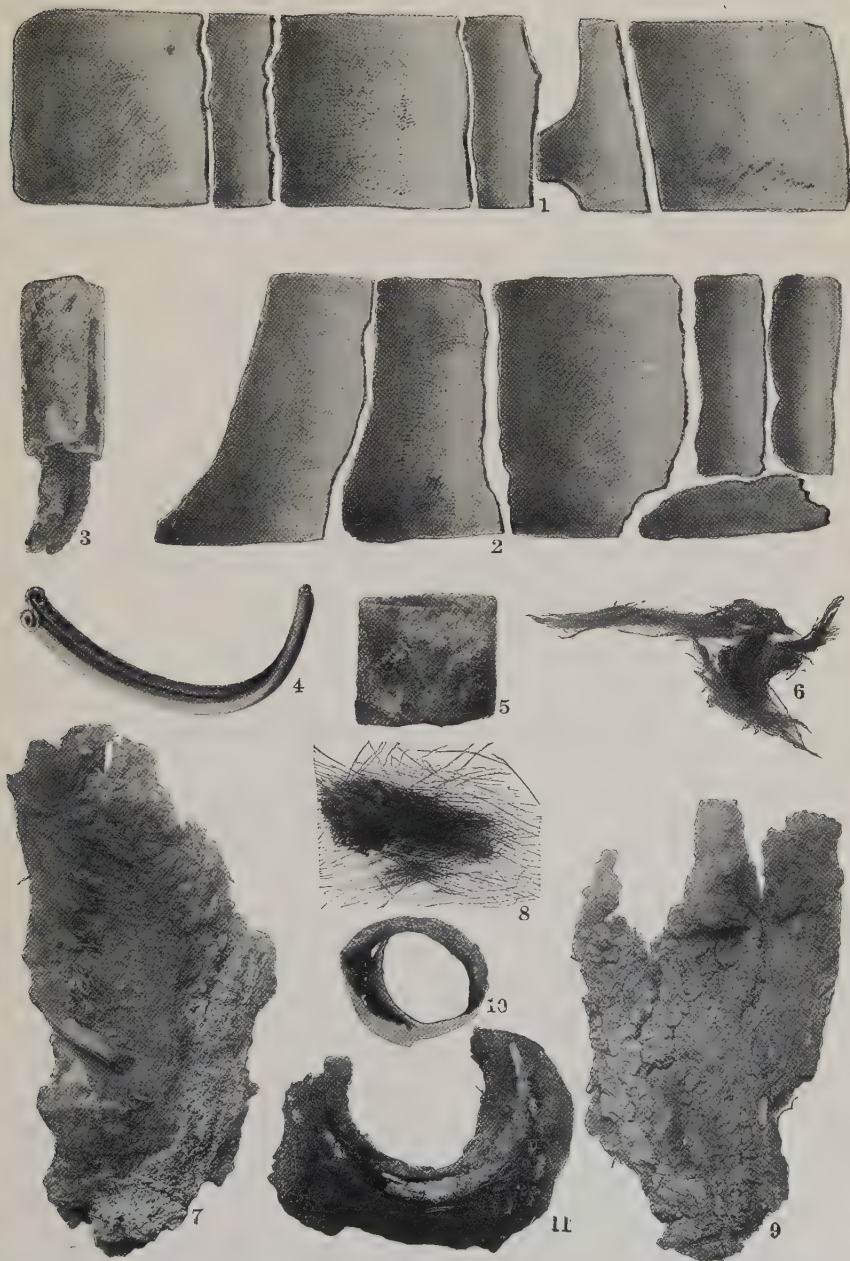
# Plate 36



Shell articles principally from graves



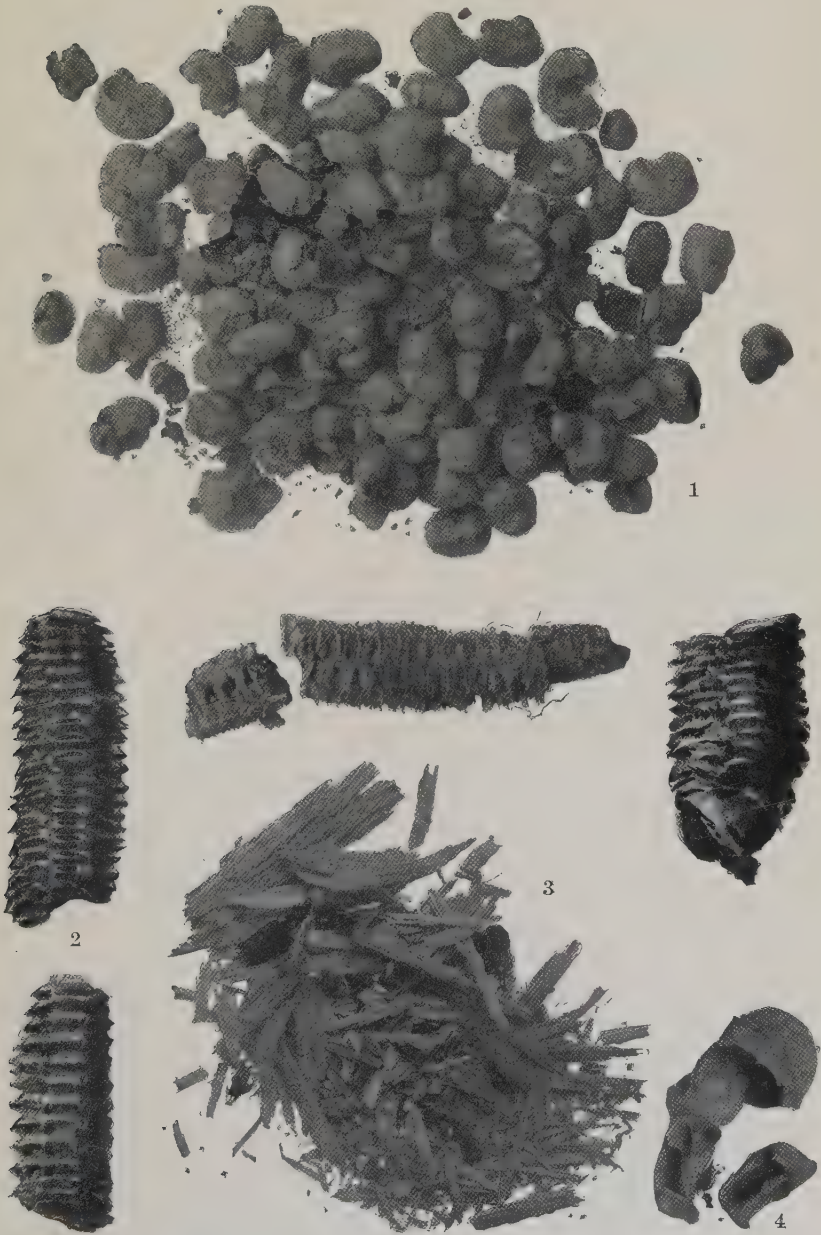
# Plate 37



Copper articles and articles preserved by contact with copper. 1, 2=Broken bracelets of copper from grave LI. They yet show the impressions of the human skin against which they lay. 3=A bead in which is a portion of a skin thong. 4=A portion of a copper bracelet. 5=A ring from grave LI. 6=Deer hair from grave LI. 7=Bark and deer skin from grave LI. 8=Portion of human scalp and hair from grave XC. 9=Mass of herbs from grave LI. 10=Ring from grave XC. 11=Wood preserved by copper ring



Plate 38



Vegetable matter preserved by carbonization. Figure 3 is that of a mass of decayed resinous wood





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